Convention Registration Form

117th Annual Convention of the NCPhA and Affiliated Auxiliaries

Instructions/Special Information:

Complete Sections A-E. Payment must be submitted at the time of registration. Convention registration is required to attend any function. Reservations must be made for all functions *(see Section D)*.

Section A: Meeting Registration *(print clearly)*

Last Name First Name

Spouse/guest

Name for Badge / Name for spouse/guest badge

Address

City,State,Zip

( ) Home Telephone ( ) Business Telephone

Is this your first NCPhA Convention? [ ] yes [ ] no

Section B: Registration Fees

CATEGORY	FOUR DAY	TH	FRI	SAT	SUN	
✓ *appropriate category*		*circle day(s) attending*				
❒ NCPhA Member	$136	$55	$55	$35	$16	____
❒ WA Member	$71	$10	$30	$25	$16	____
❒ TMA Member	$96	$35	$35	$20	$16	____
❒ Non-Member	$191	$75	$75	$55	$16	____
❒ Spouse/Guest	$96	$35	$35	$30	$16	____
❒ Exhibitor	$51	$35	comp.	comp.	$16	____
❒ Pharmacy Students	–NO REGISTRATION FEE–				$16	____

"Section B" TOTAL $ ____

Section C: Registration For Premeeting Workshops on Wednesday

It is not necessary to be registered for the Annual Convention to participate in the Premeeting Workshops.

Please ✓ the workshop(s) you want to attend:

❒ 10 a.m.–noon Understanding Medicaid

❒ 1 –4 p.m. Avoiding Medication Errors ❒ Both Sessions *(includes lunch)*

	morning only	afternoon only	all day *includes lunch*	
❒ Member	$25	$35	$60	____
❒ Non-Member	$35	$45	$75	____

"Section C" TOTAL $ ____

Section D: Events/Special Fees

Refer to Convention Program for specific times for events

Please indicate events you plan to attend.

REG=Included in Convention Registration

# tickets	*Event /Day of Event*		
____	1st General Session–*Thurs.*	REG	
____	Golf Tournament–*Thurs*	$30	____
____	Tennis Tournament–*Thurs.*	REG	
____	WA Cooking Demo–*Thurs*	$10	____
____	Dance–*Thurs*	REG	
____	UNC Alumni Assn. Breakfast–*Fri*	$13	____
____	*WA Shopping/Luncheon–*Fri*	REG	
____	2nd General Session–*Fri*	REG	
____	Exhibits/Luncheon–*Fri*	REG	
____	Awards Session–*Fri*	REG	
____	Award Recipients' Reception–*Fri*	REG	
____	Banquet–*Fri*	$35	____
____	Kappa Psi Breakfast–*Sat*	$13	____
____	Christian Pharmacists' Brkft–*Sat*	$13	____
____	*WA Business Meeting–*Sat*	REG	
____	*WA , Luncheon, & Installation of Officers, Fashion Show–*Sat*	REG	
____	Final Session–*Sat*	REG	
____	Exhibits/Ice Cream–*Sat*	REG	
____	Country Shows–*Sat*		
____	*Ronnie Milsap*	$25	____
____	*Patty Loveless*	$35	____
____	Closing Breakfast–*Sun*	REG	
____	WA Membership Dues	$12	____

"Section D" TOTAL $ ____

**Must be registered as a Woman's Auxiliary member to attend*

Section E : Payment

Add together "Sections B, C, & D's Total" and enter the amount on the line below

PAYMENT TOTAL $ _____

Method of payment *(✓ appropriate answer)*

❒ Check enclosed made payable to NCPhA

❒ Visa ❒ Mastercard

Card # exp. date

Card Holder's Signature

CANCELLATION POLICY: Cancellations must be in writing and postmarked no later than April 15. Registration refunds will be assessed a $15.00 cancellation fee. No refunds will be made after April 15.

Return completed registration by April 10 to: NCPhA, P.O. Box 229, Chapel Hill, NC 27514-0229

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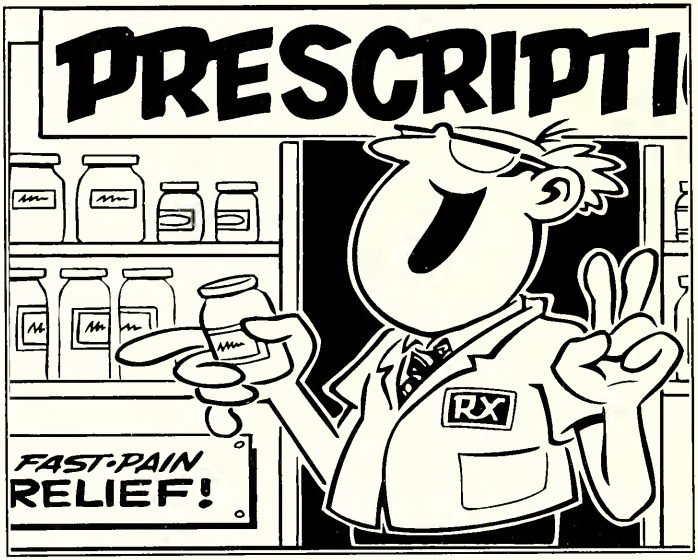
lume 77, Number 1 January/February 1997

Searching for the Soul of Pharmacy

by William A. Zellmer, page 4

Inside... NCPhA Candidates For Office

THE RIGHT PRESCRIPTION FOR YOUR BUSINESS...



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CONTENTS

ADVERTISERS

The *Carolina Journal of Pharmacy* (ISSN 0528-1725) is the official journal of the North Carolina Pharmaceutical Association, published bi-monthly at 109 Church Street, Chapel Hill, NC 27516. The Journal is provided to NCPhA members through allocation of annual dues. Annual subscription rate to non-pharmacists is $25.00 (continental U.S.). Overseas rates on request. Second class postage paid at Chapel Hill, NC. All opinions expressed in the *Carolina Journal of Pharmacy* are not necessarily official positions or policies of the association. Publication of an advertisement does not represent an endorsement.

Searching for the Soul of Pharmacy

William A. Zellmer, 1996 Harvey A. K. Whitney Lecture

Abstract: This lecture explores the theme that the soul (character) of individual pharmacists must be nourished in order to save pharmacy as a health profession.

Health care is being drastically altered by a private sector that says it wants to lower health care costs, but in fact desires huge profits. Pharmacy leaders have shown nimbleness in dealing with corporate demands, but many are becoming too preoccupied with the business of health care. Pharmacists need to discipline themselves lest the lure of the new order blind them to their primary obligations to patients. Pharmacists should act as a counterforce to the marketing of prescription drug products directly to consumers. Pharmacy is an occupation psychically bound to the act of providing medications to patients, but which knows it must find a new reason for being. There is hope for the profession in this realization—it led to the philosophy of pharmaceutical care—but no guarantees. Pharmacists must declare that their interests may differ from their employers' whenever patient welfare is in question. Suggestions are offered on how to nourish the soul of pharmacy.

I invite you to join me for a brief journey. Our destination will be an enhanced understanding of pharmacy as a health occupation. To reach that goal, we will walk to a few vantage points where the line of sight is just right to see some unique facets of our field.

I made two assumptions in mapping our itinerary: first, that everyone knows the fundamental, largely unrealized, value of pharmacists. And second, that everyone believes a vital societal purpose is served by preserving and improving our discipline as a personal health service. If my assumptions had been different, I would have chosen another path.

I have billed this excursion as "Searching for the Soul of Pharmacy," which is a metaphor for the task of professionalizing our calling.

Thomas Moore, writing in *Care of the Soul*, explains:

"Soul" is not a thing, but a quality or a dimension of experiencing life and ourselves. It has to do with depth, value, relatedness, heart, and personal substance. I do not use the word here as an object of religious belief or as something to do with immortality.

I am using the metaphor of soul because I believe that pharmacy cannot become a complete profession unless its practitioners have, in the words of Moore, "depth, value, relatedness, heart, and personal substance." The nature of our discipline is the sum total of the inner drives–that is, the souls–of individual practitioners.

Reflect for a moment on the great social ills that plague our times: homelessness, drug abuse, domestic violence, children dying from gunshot wounds; the list goes on. As Daniel Patrick Moynihan has pointed out, we have reset the social norms so that atrocities such as drive-by shootings no longer evoke a sense of outrage. How should our nation address intractable social problems? Solutions that have any hope of succeeding will aim at the hearts and minds of the people.

And thus it is in pharmacy. If reshaping the profession is the goal, then the target for action must be the souls of individual practitioners.

Out With the Old, In With the New

Let's begin our trip. The first vantage point offers a look at the health care enterprise.

No matter in which direction we glance, we see a preoccupation with consolidation and reconfiguration, justified by the need to lower costs. On a macro level, the major targets are excess hospital capacity and overuse of medical specialists. On a micro level, the focus is on the process of delivering care, which had

become too skewed toward the convenience of providers at the expense of patients.

The experts say that health system integration will proceed until most communities have no more than three or so sources of health care. They assure us that all of the cost cutting is a necessary interim phase until the paradise of outcomes management is attained. And, we are reminded, this is private-sector health care reform, and that is good.

Congress abandoned national health reform in 1994 in part because the public feared that a new, giant bureaucracy would be created. It is ironic that what we are getting now are swelling health care networks that are often as rigid and impersonal as any invention of government.

Private-sector reform and for-profit managed care are polite terms for the rape of the health care system that had evolved after World War II. Undeniably, that system had many problems that begged to be fixed. Private insurance payment of charges and Medicare reimbursement of costs stimulated the mushrooming of specialization and overuse of costly equipment and facilities. Health care financing carried a large overhead, which covered, in effect, public goods such as health professionals education, research, public health, and uncompensated care.

But departure from the old does not in itself bestow virtue on the new. There is a distinct possibility that future social historians will characterize the current course of health care as excessive folly motivated by power and greed and unguided by a moral compass.

Smart financial people have figured out how to make big money during the transition to a new order. Profits and stock prices of health care companies have soared. Some health care executives are rewarded with annual compensation in the tens of millions of dollars. Even among nonprofit health systems, reserves in the billions of dollars have been accumulated. Health care consultants, who are absolutely brilliant at recommending solutions that lead to more business for themselves, are flourishing. In the face of all this plunder, the quality of patient care has frequently declined, but the overall cost of health care has not.

Moreover, the nation seems to be in a state of denial about the people who lack access to basic health care services. Yet the problems of the uninsured and the underinsured simply cannot be solved by the private sector alone. The only possible solution lies in a society-wide response that entails at least some role for state and national government. Hubert Humphrey said that a nation will be judged by how it treats the disadvantaged within its borders. He was right, and we can do better.

Recently, I have come to appreciate the thinking of Wendell Berry, a remarkable contemporary writer of essays, poetry, and fiction. His social criticism has renewed my awareness of the deep currents of life in our times.

Berry lives on a farm in his native Kentucky. Many of his ruminations deal with how national and international corporations and the technology they spawn are destroying communities such as his. Berry elucidates the natural connection between all life and the land. He explains how interference with that bond, in the interest of amassing corporate power and wealth, debases the lives of ordinary people. I had often thought that this analytical framework could be applied to modern health care, so I was pleased to discover a recent essay of his that makes this point explicit.

Listen to this comment by Berry:

> How can cheapness be included in the criteria of medical...performance? And why has it not been included before now? I believe that the problem here is...the medical industry's fixation on specialization, technology, and chemistry. As a result, the modern "health care system" has become a way of marketing industrial products, exactly like modern agriculture, impoverishing those who pay and enriching those who are paid. It is, in other words, an industry such as industries have always been.

Corporatization of health care is indeed one of the dominant realities of our times. Steadily, the imperative to make a big profit is elbowing aside professional perogatives throughout patient care. And, in the process, all health professionals are struggling to remain centered on the needs of patients.

Let's think about these observations as they relate to pharmacy. Pharmacists in all sectors of practice are enmeshed in the web of health care transformation. In hospitals and health systems, this often results in a level of chaos that makes it difficult to concentrate on serving patients. Sometimes, amid this disorder, the only apparent plan for avoiding drug misadventures is for all health care workers to keep their fingers crossed. In health systems, many excellent pharmacy programs, which served patients well and built practitioner self-respect,

have been dismantled.

Unfortunately, most health care settings do not have the benefit of sensitive executives who understand how to manage transitions well, who know how to lead a group wisely from letting go of the past, through the neutral zone between the old reality and the new, to the new beginning. This insensitivity contributes to widespread anxiety among pharmacists about the future.

One the other hand, this era of re-creation in health care offers many opportunities for pharmacists who are enterprising and nimble. By and large, pharmacy's leadership reflects the optimism of those who understand these opportunities. At times, it seems that the happiest pharmacists on earth are those who understand the flux of health care, who have a gift for sharing their insight, and who are excited by the race to stay at the forefront of change.

"Soul" is not a thing, but a quality or a dimension of experiencing life and ourselves..."

I worry, thought, that many of these pharmacists seem to have turned themselves over completely to a corporate agenda, which generally has an antiquated view, or no view at all, of what pharmacists can contribute to patient care. To the extent that our best and brightest practice managers are absorbed by the business of health care, a vital thread in pharmacy's soul is being unraveled.

Living, as we do, in a roiling brew of chaos and opportunity, we need to discipline ourselves at times to withdraw and look to the inner self. We may then see that the seductiveness of the new threatens to blind us to our primary obligations to the welfare and safety of patients. We may then see the pain of fellow travelers and reach out to them with a supportive hand. We may even detect in ourselves and our colleagues a moment of doubt about the wisdom of our course, which may in turn give us the courage to challenge small lunacies in our corner of the world. If practitioners do these things, they will be building their depth, value, relatedness, heart, and personal substance. They will be strengthening the soul of pharmacy.

Madison Avenue and the Pharmacist

The next stop on our journey will be a short one. We will pause at a spot that offers a perspective on some aspects of the marketing of drug products.

Most of us became pharmacists during an era when the primary marketing target of the industry was the physician. Convince the doctor to prescribe a product, and the battle was won. Now the target is shifting. It is becoming the consumer.

Hence, we are seeing a tremendous upsurge in direct-to-consumer advertising of prescription drug products, the creation of over-the-counter versions of prescription medicines, industry funding of patient advocacy groups, drug company sponsorship of behavior modification programs designed to increase patient compliance, and the construction of disease-specific patient databases that permit a company to write or call individuals who have an illness that corresponds to its product line.

This marketing shift is part of a broader attempt by the industry to control all steps in the process from discovery of a drug to its consumption by the consumer. Manifestations of this goal include restricted product-distribution schemes, disease management programs, and diversification into pharmacy benefit management, mail-order pharmacy, and specialized health care services.

Implicit in the push for consumer-focused marketing is the idea that advertising and labeling can cover everything a person needs to know about a drug product. This is quite contrary to the scientific knowledge, experience, and beliefs of pharmacists. Somehow, practicing pharmacists must position themselves as a buffer between Madison Avenue and the patient. This is already being done by health-system pharmacists who are involved in developing drug-use policy. But the role of the front-line practitioner as a counterbalance to drug hucksterism is largely undefined.

There are no overt incentives for practicing pharmacists and their organizations to cry out the truth about the need for caution and skepticism in all medication use. The motivation for doing so must come from keen thinking about the subleties of drug marketing and their implications for public health. If pharmacists are passive about drug company manipulation of consumer medication practices, then any search for the soul of pharmacy will become irrelevant.

Pharmacist Allegiance

We will move now to the final stop in our stroll, which will give us a look at pharmacy practice itself.

The most truthful thing I can say about pharmacy practice is this: It is an occupation psychically bound to the act of providing medications to patients, but which knows that it must find a new reason for being.

There is hope in pharmacy's recognition that it must change. And there is hope in the fact that many pharmacists have rallied around pharmaceutical care, which has a strong moral and philosophical foundation. But there is no guarantee that this hope will lead, anytime soon, to a secure place in health care.

Let me tell you a story about Jonas Salk. Dr. Salk was the University of Pittsburgh virologist who developed the first safe and effective polio vaccine, and he was widely admired for that achievement. He used to deflect public adulation by referring to a Harvard scientist, John F. Enders, and saying of him, "He threw a long forward pass, and I caught it." It was Enders who had developed the method of culturing polioviruses that made Salk's achievement possible. Enders threw a long forward pass and Salk caught it.

The history of pharmacy records some long forward passes but also documents many fumbles and incompletes. In particular, what comes to mind are this century's numerous efforts to marshal support for fundamental reforms of pharmacy practice and education based on systematic studies of the field. To be sure, these efforts influenced the upgrading of pharmacy education from a two-year minimum requirement in 1907 to five years in 1960. But, unlike medicine, pharmacy has never found the resources or the resolve to sustain for long any well-organized, precisely targeted reform that made a difference in the status of the occupation.

The heritage of pharmacy is a motley mix of business and practitioner interests. For a long time now, the majority of practicing pharmacists have been employees, and not pharmacy owners. But the practitioner community has made very little progress in articulating its unique interests as a health occupation-interests that are quite different from those of the business, institutional, or corporate entities that employ pharmacists.

Practitioner organizations should be dauntless in making this distinction to public policy makers and to the standard-setting bodies in practice and education. The essential difference between the pharmacist and the pharmacy facility should be reinforced whenever a health consumer and a practitioner interact. It should be crystal clear in those encounters that the pharmacist has no allegiance greater than that to the individual being served.

Those instances in which patients actually see pharmacists occur mostly in drugstores. There the pharmacists are, sometimes on a platform, sometimes behind glass, busy, isolated, in their sanctuaries. But at least they can be spotted. That is more than generally can be said for pharmacists in hospitals.

The law of the land says that pharmacists must offer to talk to ambulatory patients about their prescription medications. What a priceless opportunity for the pharmacist to demon-

How do we nourish the soul of pharmacy? I do not profess to have the answer to that question. But let me suggest several ideas that may be worthy of consideration:

1. Encourage ambulatory patients to select a personal pharmacist. Not a pharmacy, but a pharmacist.
2. Teach pharmacists how to recognize and resist corporate edicts, both blatant and subtle, that undermine their ability to care for patients.
3. Recognize and honor pharmacists who have demonstrated an authentic professional commitment to patients. We need more heroes in the frontline ranks of pharmacy.
4. Increase efforts to develop and enrich the work of frontline pharmacists in all practice settings. Let's not become distracted from the fact that the true nature of our discipline is defined in the everyday interface between pharmacists and patients.
5. Limit entry to colleges of pharmacy to students who have already demonstrated their capacity for compassion and caring.
6. Develop a public report card on colleges of pharmacy and postgraduate residency programs that rates their ability to produce outstanding patient care pharmacists.
7. Foster a nationwide dialogue among pharmacists and physicians and consumer representatives about the problems related to medication use and what these three groups can do together to make the situation better.
8. Systematically focus the immense but fragmented continuing education resources of pharmacy on the knowledge and skills that will be needed by practitioners to make our discipline a caring profession.
9. Create a high profile center supported by pharmacists and consumers to study societal medication use issues and make recommendations for resolving them. Include in the scope of this center the effects of industry marketing practices.
10. Put as much energy into long-term planning for pharmacy as is put into short-term strategizing. Let's begin to outline, through our professional organization, what we can achieve over a generation or two, not just within the next 12 months. Let's see if we can coordinate the planning efforts of national and state practitioner organizations and the academic community.

strate a responsibility to the patient, and to reinforce that fidelity again and again. It was a dark hour for pharmacy when, in an apparent telepathic wave of groupthink, the owners and managers of community pharmacies decided to obey merely the letter of the law, not its spirit. At prescription counters across the nation, clerks are asking customers, "You don't really want to bother a pharmacist about your medicines, do you? Then please sign here so we won't get into trouble with the law."

Although the importance of this issue is self-evident, there is little fervor among pharmacists anywhere for changing the practice. But unless pharmacists begin showing their souls at the prescription counter and the outpatient window, pharmacy will be haunted to its grave by this missed opportunity.

At times, it seems that the happiest pharmacists on earth are those who understand the flux of health care, who have a gift for sharing their insight, and who are excited by the race to stay at the forefront of change.

Let's shift our sight for a moment to acute care pharmacy practice. Rampant lip service is given here to pharmaceutical care. Yet the concept has been very difficult for hospital pharmacists to implement because it calls for a direct relationship with the patient. This characteristic of pharmaceutical care encounters five major barriers in hospitals.

First, in the hospital, patients clearly "belong" to the attending physician. There is not a tradition in hospitals of nonphysicans consulting independently with the patient.

Second, in the culture of hospital pharmacy, the practitioner is oriented toward the hospital and its rules, not toward the personal health needs of the patient. In other words, the pharmacist's covenant has been with the hospital, not the patient.

Third, clinical pharmacy, as it evolved in hospitals, has been oriented toward the physician, not the patient directly. Here the pharmacist's covenant is with the doctor.

Fourth, the reward system in hospital pharmacy for so long has been tied to efficiency and accuracy in drug distribution that pharmacists have been much too slow to turn over this work to well-trained technicians.

Fifth, hospital pharmacy still suffers from a vestige of an earlier age when it attracted practitioners who wanted refuge from the patient contact of community pharmacy. Unfortunately for us today, there is no tradition in hospitals of pharmacists talking with patients. Even when pharmacists accompany physicians on rounds, they are often there incognito, under cover as just another medical consultant. Most hospitalized patients have absolutely no awareness of how pharmacists are contributing to their care.

This analysis can be boiled down to the fact that hospital pharmacists, including clinical practitioners, have defied their roles primarily in terms of technical competence, not in terms of patient care. This is not a patina that can be rubbed away lightly; it emanates from deep within hospital pharmacists. For that reason, I think we have greatly underestimated the magnitude of the paradigm shift that pharmaceutical care embodies. This concept of practice poses as great a leap for hospital pharmacy as the shift in the world of astronomy from Ptolemy to Copermicus, or in the field of physics from Newton to Einstein. It will take much more time and effort to transform acute care pharmacy practice in the direction of pharmaceutical care than most of us have imagined.

Nourishing the Soul of Pharmacy

I willingly concede that for every case of disappointment I have cited, just as many hopeful examples about the vitality of pharmacy can readily be found. By no means is everything doom and gloom in pharmacy practice. But I had four reasons for leading you down the particular path I chose.

First, I believe that we tend to deny the true state of pharmacy practice.

Second, I believe that denial is not a sound basis on which to build our future.

Third, I believe that the fate of pharmacy practice in all settings is interlinked, and that specialized areas would not isolate themselves from the discipline as a whole.

Fourth, I believe that we need to work on nourishing the soul of pharmacy, as reflected in the orientation of individual practitioners, if we are to save this occupation for the benefit of patients.

Conclusion

In drawing this journey to a close, let me remind you of Thomas Moore's definition of

soul: "It has to do with depth, value, relatedness, heart, and personal substance."

People want and need pharmacists with those characteristics-pharmacists with soul.

Let's dedicate ourselves to remaking this occupation of ours into a profession that gives people what they want and need.

This is not an agenda that we can assign to someone else. Each of us must take personal responsibility for making this happen.

Individually, we can examine and adjust the focus of our own work. We can support and encourage our colleagues in the same pursuit. We can create and support collectively, throughout professional organizations, long-term efforts that build the soul of pharmacy.

Above all, we can speak up.

Speak up for the patient.

Speak up for safe medication-handling practices.

Speak up for medication therapy that makes sense.

We *can* do this. We *must* do this.

References available upon request.

William A. Zellmer, M.P.H., is Vice President of Professional and Public Affairs for the American Society of Health-System Pharmacists.

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NCPhA 1996-97 Candidates for Office

Ballots for NCPhA's 1997 elections will soon be mailed to all Association members. The slate consists of two candidates for president-elect and five candidates for three member-at-large positions on the NCPhA Executive Committee.

For the three member-at-large positions, the three candidates who receive a plurality of votes will be elected to a two year term. NCPhA members will receive their official ballot in March. Ballots are to be returned within 30 days of receipt. Ballots will be counted by the Elections Committee in early April and results published in an upcoming issue of the Journal.

Successful candidates will be installed in their new office in April 1997 during the 117th NCPhA Annual Convention in Myrtle Beach, South Carolina. The 1996 Nominating Committee presents the following slate of officers which was accepted by the membership at the 116th Annual Convention in May 1996. Biographical data is present for each candidate. Candidates were asked to respond to the question: *"Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?"*

Candidates for President Elect

W. Keith Elmore

Keith Elmore is a 1972 graduate of the UNC School of Pharmacy, of which he was a member of Kappa Psi. He is currently president of Bellamy Drug Company in Wilmington.

Having been a member of NCPhA for 25 years, Keith has served on several committees, including the Finance Committee, Public Health, Nominating, as well as his current position on the State Legislative Committee. He served on the Executive Committee as 2nd vice president, 3rd vice president, and member-at-large. He also chaired the Policy & Procedures Committee of the NCPhA charged with the development of job descriptions and evaluations for NCPhA staff.

Keith is a member of the New Hanover County Pharmaceutical Society as well as the New Hanover County Board of Health where he currently serves as vice-chairman.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

The application of pharmaceutical care in practice is only the first step in answering many of the problems facing pharmacy today. Certainly, high quality patient care is what we are all about. However, the mere provision of such care will not solve the problems of inadequate reimbursement, lack of legislative clout, stressful working environments, unfair or discriminatory pricing and insurance plans, insufficient integration with other health care providers, and others. The answers to these are much more complicated, and require first and foremost that individual pharmacists resolve to become active in finding solutions. Alliances, networks, professional and political associations are all important means by which pharmacists can focus and voice their agenda. The issues important to the economic and professional well-being of pharmacy must be presented clearly and forcefully in the legislative and health care arenas. In addition, pharmacists should take advantage of their position as the most accessible health care professional to keep their patients informed of the problems which are impediments to continued quality

care. When the problem is an unhealthy patient, pharmaceutical care can be the solution through the provision of proper medication and education to the patient. When the problem is an unhealthy economic or professional environment, pharmaceutical care takes on another context—care for the profession of pharmacy by its practitioners. This care also involves educating patients, as well as payers, and other health care providers. Pharmacists are the only ones qualified to provide this care for the profession. We must work together in voicing our issues and be politically active. Above all, we must constructively speak out for what we believe in. By providing this kind of care for our profession, we can assure that pharmaceutical care for the patient will continue to be a mainstay in quality health care.

John A. Mitchener III

John Mitchener is a 1963 graduate of the UNC School of Pharmacy. He is past president of the Northeastern Carolina Pharmaceutical Association and a life member of the NCPhA. He is also a member of the UNC School of Pharmacy Alumni Association and a member of the North Carolina Retail Pharmacy Association.

Mitchener served as a pharmacist with the US Army in Saigon, South Vietnam for 15 months between 1967 and 1969. Since 1969 he has been a pharmacist with managerial responsibilities at Mitchener's Pharmacy, Edenton. Following the death of his father in October 1985, he became president of the company.

Mitchener has served as chairman of the NCPhA Socio-Economic Relations Committee for 3 years. Subsequently, he served as a member of the Association's Executive Committee for 3 years.

Mitchener has served his community over the years as vice-chairman and chairman of the Edenton-Chowan Board of Education, where he actively supported the $7 million Bond Issue which passed in 1988 featuring major improvements in middle school education.

Is Pharmaceutical Care the answer to many of pharmacy's problems?

"Pharmaceutical Care" is the latest buzzword to hit pharmacy.

For some it is an updated synonym for "clinical pharmacy" while others see it as a disguise for "managed care."

For some, "revisions of this state's pharmacy practice act" is the real thrust of the term while others see its cornerstone to be "Pharm .D. education" at the university.

However, Mitchener's Community Pharmacy finds "pharmaceutical care" to be the adequate counseling of patients, the perceptive use of drugs and devices in the therapeutic restoration of health PLUS responsible reimbursement for products and cognitive services.

But, in the current climate where "anything goes" to gain market share, we see regional empire building by drug chains, managed care groups composed of manufacturers and mail-order merged together, and dictatorial insurance companies all creating a totalitarian climate for health care which abolishes freedom of choice at most every level of our life.

This would not be permitted from the government, yet it is tolerated from private enterprise.

The rush for market share is no friend of "pharmaceutical care." One moment participants speak vociferously of "free markets" exclaiming the need to "Get the government off our backs!" And, in the next moment, continue discriminatory pricing, manipulation of the drug selection process, and the shackling of pharmacies with ever-small fees for ever-costlier inventories and services.

Such realities do nothing to sustain the medical and pharmaceutical practitioners who brought care to the rural and forgotten towns of North Carolina over the last 40 years. Instead they undermine the viability of health providers already in place.

Basic questions remain. And the longer they remain unanswered, the more comprehensive pharmaceutical care is jeopardized.

1. the abolition of discriminatory pricing.
2. the establishment of level economic playing fields.

3. reversing the onslaught of degrading fees for prescription reimbursement. When the carnage is over and there is only one major chain in each part of our country, will any of them have the backbone (since they have the market share) to stand up to the insurance companies and say, "Enough is enough. Fees must be increased to .....dollars and cents?"

4. payment by NC Medicaid and others for mandated counseling. Time is money, counseling is time-consuming. Yet more is expected daily from less reimbursement.

Since the government decided to "model excellence in health care," then it should model reimbursement with money for counseling.

I see no reason why boards of pharmacy should not speak out for revision to our current situation rather than sit as mute tribunals.

All recent "trends of the future" say that community independent pharmacies will be gone in North Carolina and across the nation in 20 years or less.

The NCPhA is an umbrella organization for all settings of pharmacy in our state. And properly so. But those not in community pharmacy should not regard our troubles with indifference. Permitted to worsen, these troubles will adversely affect other parts of the profession as well.

North Carolina stripped of its many one-man pharmacies in its many small towns will not be a healthy North Carolina.

Pharmaceutical care today must nourish and sustain the profession's weakest link, community pharmacy, if its other perspectives on improved patient care for the state and the nation are to make their most beneficial impact.

Candidates for Members-at-Large

Samuel B. Burrus II

Sam Burrus is co-owner and president of Martin's Drug Store in Canton, NC. He received his B.A. in Chemistry in 1977 and his B.S. in Pharmacy in 1983, from the University of North Carolina. Sam is a member of NCPA (formerly NARD), a life member of NCPhA, where he has served on the Nominations, and State Legislative, and National Legislation Committees. He is also a member of the NC Retail Pharmacist Association. Sam currently serves as chairman of the WNC Pharmacists Co-Operative, of which members will soon be certified in diabetes and asthma care. He is a member of Canton Presbyterian Church.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

Pharmaceutical Care is not the answer to many of pharmacy's problems. Discriminatory pricing and freedom of choice issues are slowly being resolved in our nation's courts and state and federal legislatures. Pharmacists should continue to support legislation which addresses these critical problems. Such issues must not be neglected.

Pharmaceutical Care may be the answer to some of pharmacy's problems, if we can convince payers of the tremendous value of true pharmaceutical care—the direct, responsible provision of medication-related therapy for the purpose of achieving specific outcomes that improve a patient's quality of life. These outcomes include: prevention of disease or symptoms, elimination or reduction of symptoms, cure of disease, and arrest or slowing of the progression of disease processes.

Such care can save our health care system billions of dollars annually, and pharmacists must be adequately compensated for providing such care! Considering the actions of Merck-Medco the past year, some payers will hopefully be easier to convince than others.

Jean B. Douglas

Jean Douglas is a 1973 graduate of the UNC School of Pharmacy and a graduate of the University of Tennessee Doctor of Pharmacy program. She completed an ASHP accredited residency in Hospital Pharmacy at The Moses H. Cone Memorial Hospital and continues to practice there as assistant director, clinical coordinator. In her practice, she has helped develop an advanced practice for pharmacists as clinicians making drug therapy decisions in patients each day. This practice allows pharmacists to assess the patient for appropriate drug therapy, determine dosage/intervals, order lab tests, and educate the patient about the medication course, as well as evaluate therapeutic outcomes via clinical paths.

As an active member of several state and national pharmacist organizations, Jean has worked to expand time for pharmacists to be direct care providers. She chaired the North Carolina Center for Pharmaceutical Care, formerly named the Pharmaceutical Care and Practice Committee, last year and currently remains active in continuing to implement initiatives for reimbursement and practice alliances. Jean was the recipient of the Don Blanton Award, presented by the North Carolina Pharmaceutical Association this past May.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

Pharmacists are the answer to many of pharmacy's problems!

Pharmacist practice has evolved over time from one of diagnosing and compounding an individualized prescription for the patient to one where the medication is already compounded for the pharmacist to affix the directions and instruct the patient on the use of the medicinal.

Today's rapidly changing health care environment with new technology is creating a tension for change; and there is a tremendous opportunity for pharmacists to make another practice change. Pharmaceutical care practice forces the pharmacist to evaluate the patient's problems and design a monitoring plan which will achieve desired outcomes and solve/prevent drug-related problems. Other health care providers are beginning to ask pharmacists to assume this role.

Therefore, if you think that pharmacy's problems are lack of patient specific information, lack of reimbursement based on drug therapy knowledge application, lack of time to talk/help the patient, limited ability to network with other team members, inability to follow the patient throughout the health continuum, etc., and you desire a more professional, patient practice, then a change is definitely needed. Health-systems are being designed to reduce the fragmentation of health care and costs, while maintaining and improving outcomes. As these systems form, pharmacists have the opportunity to demonstrate the benefits of this new practice model. Based on current research, the pharmaceutical care model will help pharmacists become more integrated into the health care team.

Our future is what we make of it!

Retain this important information about your NCPhA candidates so you can refer to it when your ballot arrives in the mail. Ballots will be mailed to all NCPhA members who are eligible to vote. You will receive your ballot a few days after receiving the Journal.

Constance A. McKenzie

Connie McKenzie received her B.A. in 1982 from the University of Tennessee. In 1986 she graduated from Mercer University School of Pharmacy and continued there as the Drug Information Resident. After completing a residency program in 1987, she joined the faculty at Campbell University School of Pharmacy as the Director of Drug Information. For the last five years she has worked as the Director of Experiential Programs for Campbell serving between the university and over four hundred preceptors.

Connie has been active in pharmacy and community affairs at local, state and national levels. As a member of NCPhA, she has served on the Public and Professional Relations Committee and the Finance Committee. She has also served as co-chair of the Pharmacy Week Committee for two consecutive terms and has served on the *Carolina Journal of Pharmacy* Editorial Advisory Committee since 1992, chairing this committee for the past three years. In 1992, she represented NCPhA as a delegate to the APhA meeting in San Diego. She is also a member of the Drug Information Association, the American Association of Colleges of Pharmacy, Christian Pharmacists Fellowship International, the North Carolina Women's Auxiliary and the North Carolina Society of Health-System Pharmacists (NCSHP). Currently, Connie is chairing the Pharmacy Practice Committee for NCSHP, a committee of which she has been a member since 1989.

At Campbell, Connie serves as the advisor to Kappa Epsilon in which she is involved in numerous professional and service projects. She is a member of Memorial Baptist Church where she currently chairs the College Committee.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

Certainly the pharmaceutical care model does not address all of our profession's problems. However, it is a step in the right direction. Pharmaceutical care moves pharmacy into more of a patient care mode. Over the years, our profession has begun to focus on medication delivery and the financial issues inherent in that role. Through pharmaceutical care, pharmacy practice focuses on the patient and actively addresses the financial implications which surround a patient oriented practice. For the pharmacy profession to remain, or in some cases, become an integral part of health care, we must continue to unite our efforts to assure our place in this rapidly changing society. I believe pharmaceutical care is moving us in this direction. Schools of pharmacy, professional organizations and pharmacy practitioners are working together to assure a bright future for our patients.

Joseph S. Moose

Joe Moose is manager at Moose Professional Pharmacy in Concord, NC. Joe is a 1990 graduate of Campbell University's charter Pharm.D. class. He is a Fellow of the American Society of Consultant Pharmacists (FASCP) and a member of the NCPhA. In addition, Joe is active in civic and community affairs.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

As we change our practices from a product based only, to a more patient based practice, pharmaceutical care will represent an expansion to services that pharmacists have been providing for years. Along with this expansion of services comes expanded responsibility. Responsibility to do what we have been claiming we can do for years.

Pharmaceutical care, continuity of care, outcomes management, or any of the many pharmacy buzzwords are not the answers to any problems if we as a profession do not perform them. We cannot sit at our computer and wait for it to flag a drug interaction and expect

a third party to reimburse us for this and call that pharmaceutical care. That type of pharmacy is not the answer.

Who is not squeezing pharmacy these days? Third party payers want to decrease cost and do so by decreasing our reimbursement. Patients want decreased cost, quick fill rates and more information. Policy makers want counseling. Physicians want information for themselves and their patients, and bosses want increased numbers. Everyone wants to tap into pharmacy's cost-cutting, lifesaving potential. Nevertheless, we cannot be held responsible for providing adequate pharmaceutical care without the contribution and cooperation from MDs, RNs, RDs, patients, and a payer for these services.

If pharmaceutical care is to be the answer to many of pharmacy's problems it is only because we went out and acquired it— not because it came to us!

William H. Morris

Bill Morris graduated from the UNC School of Pharmacy in 1973 and Duke University's Physician's Associate Program in 1974. He has been with Smith Drugs, Inc. since 1977, and has been involved in compounding and various laboratory disease management areas.

Bill's professional affiliations include fellowships in the American Society of Consultant and the American College of Apothecaries. He is a member of the NCPhA and the American Pharmaceutical Association. He is past president of the UNC Pharmacy Alumni Association and a member of the UNC Pharmacy Foundation Board. He is also vice-president of the Western North Carolina Pharmacy Alliance.

He is a member of the First Baptist Church in Waynesville and in his spare time enjoys golf, shooting pool, and water sports.

Is Pharmaceutical Care the answer to many of pharmacy's problems? If yes, why? If no, why?

Ultimately, I think the answer is yes. It is frustrating and angering to eventually realize that profit from just dispensing medications to our patients is all but gone. We should have never let someone else tell us what to charge and then to accept whatever they dictate our profit to be. With prescription dispensing profits dwindling to nothing we are forced to look to other areas for profit to stay in business. These could come from other areas in pharmacy, i.e. homeopathic, herbal, DME, but it seems to me the most logical avenue comes from using our knowledge about drugs. Pharmaceutical care involves the "art" of dispensing medications but, also involves going much further. It involves looking at the patient as a whole, and how their medications affect their lives, quality of life, family, health and well being. I think a pharmacist practicing the best "pharmaceutical care" would look at their familial history, drug history, current drugs, OTCs, allergies, drug-drug interactions, disease states, compliance, their understanding of their drugs and how they work, the best drug choice for their disease state, whether compounding is needed to make their drugs work better or taste better. All these things require an expertise that pharmacists have. I am aware of several pharmacists that are currently trying to charge patients and insurance companies for these services. Slowly, managed care is realizing that quality health care saves money in the long run and is looking for pharmaceutical care providers. The nice thing about that to me is that pharmaceutical care should cross the boundaries of retail, hospital, and long term pharmacy and bring us closer together. As a profession, through certification standards, we should assure managed care and patients that no matter where in the state they may live, they will receive "state-of-the-art" pharmaceutical care. If we as a profession fight to have a level playing field and access to all patients for pharmaceutical care, then perhaps this could be an answer to our economic viability. One last issue is reimbursement. When we price our cognitive services, hopefully this will encompass the total monies saved from preventative quality information and care and not just the cost of our time.

Echinacea *(Purple Coneflower)*

Echinacea, a Native American plant also known as the Purple Coneflower, was first introduced to clinicians in 1887 and quickly became the most prescribed herbal medicine in the U.S. Of the nine Echinacea species that were discovered, only three were commonly used: E. angustifolia, E. Purpurea and E. Pallida. These species were primarily prescribed for their anti-infective qualities.

Today Echinacea once again tops the chart as it has become the most popular herbal remedy across the country. However, clnicians now promote this herb for its immunostimulant characteristics in treating the symptoms of the common cold, flu, recurring respiratory and urinary tract infections. Liquid extracts of Echinacea are also prescribed topically for some wounds. Over 300 journal articles have been published since 1930 to validate such claims.

Pharmacology

Echinacea contains many active compounds including polysaccharides, volatile oils, caffeic acid derivatives and isobutylamides. These compounds, along with others, work synergistically to produce desirable effects. According to a number of studies, Echinacea activates or stimulates the immune system by triggering phagocytosis, T-lymphocyte and interferon production and increasing the mobility of leukocytes (WBCs).

Echinacea also inhibits hyaluronidase, an enzyme commonly referred to as the Spreading Factor. This enzyme is secreted by microorganisms found in snake venom to break down hyaluronic acid–a major component of the ground substance that holds cells together. Thus, the inhibition of hyaluronidase prevents the spread of microorganisms throughout the body.

Michael V. Rogers

Bill Cheek

Michael V. Rogers, Pharm.D. and Bill Cheek, R.Ph. are co-owners of Nature's Pharmacy—a natural pharmacy located in Asheville, NC. For more information on natural products call Mike or Bill at (704) 251-0094

Dosage Forms

Echinacea is available in capsules and liquid extracts. The capsules have a shelf-life of 1-2 years, whereas the liquid extract (in a hydroalcoholic base) can last up to 3 years if stored properly. The liquid extracts should be stored in amber bottles, away from heat and light.

Dosage

Recommendations regarding dosage vary depending on the source. However, for most acute infections such as colds or the flu, the dosage is as follows: take 15-30 drops of the liquid extract in warm water or 1-2 capsules (400 mg–500 mg) every 2-3 hours for up to 5-7 days.

Side Effects/Toxicity

Although there are no real reported side effects or toxic reactions documented when Echinacia is used at recommended doses, the liquid extract can cause a harmless tingling sensation in the mouth. This occurs when the extract is held in the mouth or on the tongue for an unusual amount of time.

Conclusion

The FDA now allows manufacturers to make claims regarding the effects an herb has on the body's structure and function, but they may not link any indications for usage with the product. Moreover, such claims must be supported by scientific documentation and research. [Reminder: The label on a bottle of Echinacea may say that it stimulates the body's immune system, but it cannot say that it is used for treating symptoms of the common cold.]

If you are interested in publishing a guest column in the *Carolina Journal of Pharmacy* contact Terri or Jennifer at the NCPhA office at 800-852-7343 for more information.

FDA Proposes to Withdraw Seldane Approval

FDA has announced its intention to withdraw the approval of Hoechst Marion Roussell's Seldane™ (terfinadine), Seldane D™ (terfinadine and pseudoephedrine) and generic versions of the prescription antihistamine. FDA has determined that drugs containing terfenadine are no longer shown to be safe because Allegra™ (fexofenadine) is now available.

FDA recently approved Allegra™, which contains fexofenadine, the primary active derivative of terfenadine produced in the body when terfenadine is taken. Fexofenadine provides nearly all of terfenadine's beneficial effects but does not appear to cause a potentially fatal heart condition when taken with some other commonly prescribed medications.

North Carolina Ranks 5th in the Country on Stroke Mortality

Roughly 40 percent of all deaths in N.C. can be attributed to cardiovascular disease, the state's leading killer. Recent studies have also moved N.C. to 12th in the country on heart disease mortality.

N.C. is making concerted efforts to develop a comprehensive plan to help prevent cardiovascular disease in the state via the North Carolina Heart Disease and Stroke Prevention Task Force. The task force has already developed two "quick start initiatives" that will be introduced to the General Assembly this session.

New Software Available for Programming Recomm Electronic Display Boards

Pharmacies who have the Recomm Vox Apothecary electronic signs will be pleased to learn of a new software package (called Script Designer) that allows pharmacies to run the signs themselves. Software Solutions Plus, a Canadian company, has been distributing Script Designer in Canada since June of 1996. It is currently being used by pharmacies all across Canada and it's now being made available in the United States.

Pharmacy Lobby Fund Grows

Thanks to many contributors, the Pharmacy Lobby Fund now has over $4,300. This fund drive was initiated to help pass the pharmacy practice act revisions which will be introduced to the General Assembly this long session. The North Carolina General Assembly convenes January 29, 1997.

NCMS Promotes Improved Relations

The North Carolina Medical Society encourages physicians to improve relationships with their local pharmacists. The NCMS will contact affiliate medical societies to emphasize the importance of the pharmacist's role in securing optimal patient outcomes. The development of joint education programs will also be entertained.

HCFA Cracks Down on DME Regulations

The Health Care Financing Administration (HCFA) implemented a new regulation that increases current billing standards on durable medical equipment (DME). Effective as of December 1, 1996, drugs including nebulizer drugs, parenteral nutrition solutions, chemotherapeutic agents, pain management medications, and antibiotics used in conjunction with DME can be billed to Medicare only by a licensed pharmacy. This ruling precludes pharmacists from contracting back to DME suppliers for such drugs. Furthermore, pharmacists must obtain a Medicare supplier number prior to billing Medicare.

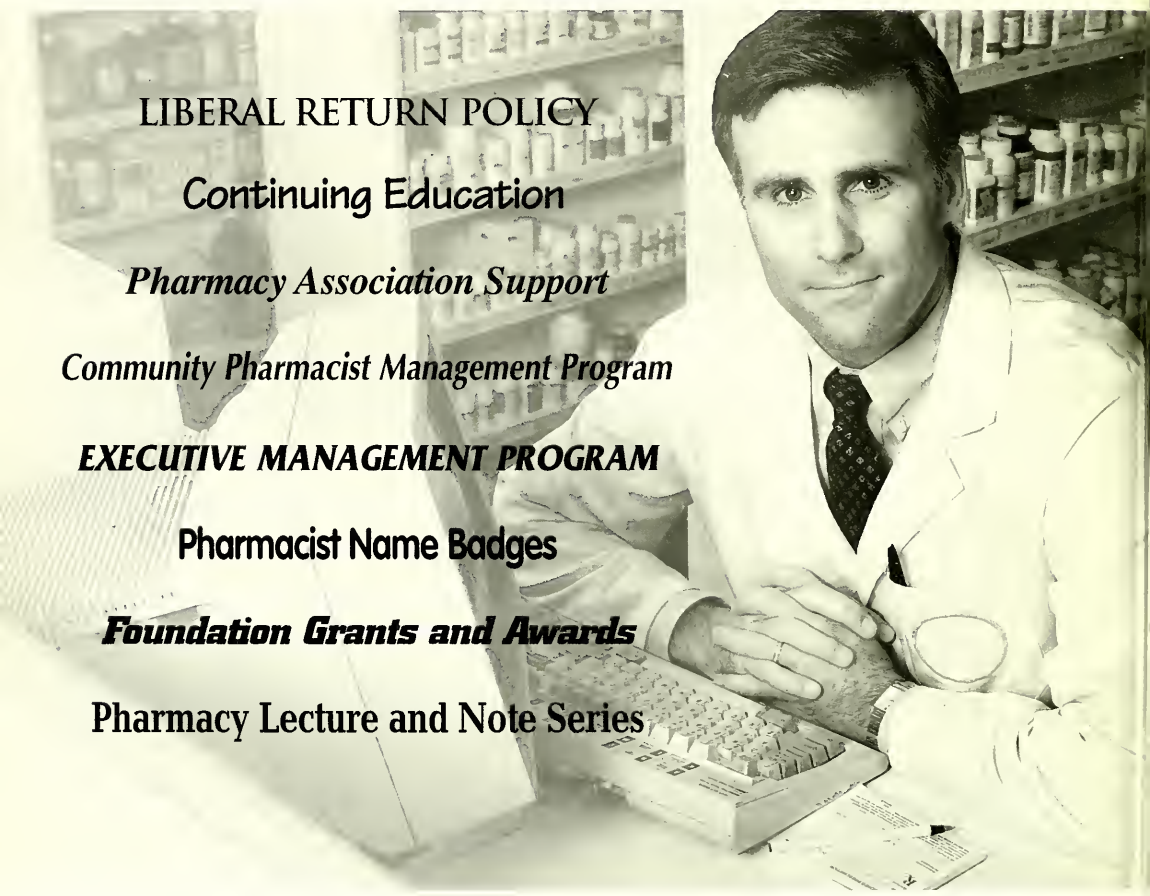
NABPLEX's Computerized Format: Friend or Foe

On June 25, 1996, of the thousands of pharmacy students that sat for the NABPLEX around the country, 194 were randomly selected to take the first computerized version of the exam. The results of the two formats, whose contents were identical, were found to be statistically insignificant when comparing the average scaled test scores. In addition, completion rates (the time it took each student to complete the exam) indicated very little difference between the two testing groups.

This trial study concluded the administration of the age-old paper-and-pencil format as the new computerized format will be implemented in 1997. The 1997 computer version will bring some programming advancements to make the test run even smoother.

What pharmacists may think about SmithKline Beecham Pharmaceuticals

What pharmacists ought to know...



SB
SmithKline Beecham
Pharmaceuticals

The first task in the Board of Pharmacy column is to dispel some common false impressions.

False Impression #1 is that pharmacists cannot charge for patient counseling. There is nothing in North Carolina statute or rule which prohibits a monetary charge for patient counseling. A somewhat similar phrase did appear in the first version of the proposed rule but it was deleted immediately. Please note that some benefit contracts do have a clause about extra charges for beneficiaries but there is nothing in statute or rule in this state which prohibits that conduct.

False Impression #2 is that prescriptions can be mailed into the state but North Carolina pharmacists cannot operate a mail order pharmacy. That is false. Many years ago the Board had a rule which would have prohibited a large scale mail order pharmacy, but that is not now the case. At the present time, the Board office is unaware of any large scale mail order pharmacy operating from North Carolina and sending prescriptions out of state.

False Impression #3 is that when the change in education moves to the all Pharm.D. degree at about the year 2000, all pharmacists will have to go back and get a Pharm.D. degree to keep their license. That is false. Anyone who has obtained their license with a B.S. degree (four or five years) or even a Ph.G. degree is licensed to practice and that license cannot be taken away except for specific disciplinary reasons in the statute. This would include failure to follow the laws governing the practice of pharmacy or distribution of drugs, fraud, conviction of a felony involving pharmacy practice, drug use and abuse, etc. The change in degree status from B.S. to Pharm.D. will not affect your license to practice.

False Impression #4 is that the antitrust laws are only applied to pharmacists while others "get away with" prohibited activities. This usually comes up under the context of a boycott where some pharmacists want to join together and refuse to do business with certain third party payers. A few years ago the owners of several restaurants talked bout banning together to threaten to stop accepting American Express cards if the company increased their discount rate. ["FTC Probes American Express Restaurant Fee Revolt," *The Wall Street Journal*, April 26, 1991] This produced a Federal Trade Commission probe and the restaurants quickly backed off of their threat.

New Examination Procedures

Beginning with the June administration of the Board of Pharmacy licensure examinations, candidates will take the national portion of the test (NAPLEX) *on computers* at various Sylvan Learning Centers around the state. There are testing locations in Asheville, Charlotte, Greensboro, Greenville and Raleigh. After a candidate has been certified as eligible for the exam, an appointment will be scheduled for them to take the national portion of the exam at one of these locations. Candidates will still need to pass the practical portion of the exam which is scheduled this year on June 23rd at the Holiday Inn Four Seasons in Greensboro.

In recent years the passing rate for this examination has remained unchanged at about 90%. Well over 90% of the Campbell and UNC graduates are successful while out-of-state candidates do not perform as well.

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Campbell University School of Pharmacy

The spring semester is underway with several changes in personnel. Dr. John Mennear, chairman of the department of pharmaceutical sciences retired in the fall and Dr. Emmanuel Diliberto has now assumed this position. Dr. Mennear served a vital role in the early development of the department and was instrumental in starting the B.S. in Pharmaceutical Development of the department and was instrumental in starting the B.S. in Pharmaceutical Sciences program last year. Dr. Diliberto is an experienced pharmacologist with 24 years of industrial, governmental and academic work. In the pharmacy practice department, Drs. Tina Harrison and Carolyn Smoak have also recently joined the faculty in Geriatrics based at North Carolina Baptist Hospital in Winston-Salem (Dr. Harrison) and Internal Medicine at Womack Army Medical Center at Fort Bragg (Dr. Smoak). With the support of Glaxo-Wellcome, Dr. Steve Fuller has assumed a new position in managed care at the Kaiser Permanente clinical facility in Cary. Dr. Carlos da Camara, who was at Womack, assumed the position at Southern Regional AHEC (formerly FAHEC) occupied by Dr. Fuller. Another one of our early "pioneer" faculty members, Dr. Stacie Krick, has left the University to take a position at the Wake AHEC.

Nine faculty and forty six students attended the ASHP Midyear Clinical Meeting in New Orleans in December. Students Patrick Cline and Julie Chaffin finished in the top ten finalists in the first national clinical skills competition. Campbell hosted a very successful reception where we were able to visit with a number of our alumni.

We have made some modifications in our experiential program. P-1 students now can complete their first community pharmacy rotation in the summer between the P-1 and P-2 years. To be eligible for this rotation, students must successfully complete a "Top 100 Drugs" examination. Dr. Connie McKenzie has organized preceptor training workshops in several cities around the state to explain our new student evaluation instrument. As always, we are grateful for the excellent preceptors across the state who make these practice opportunities available for our students.

Larry N. Swanson, Pharm.D., Professor and Chairman, Department of Pharmacy Practice

UNC School of Pharmacy Receives $2 Million Gift

The UNC School of Pharmacy has received a $2 million gift to help build a $16.2 million teaching and research facility.

Banks D. Kerr of Raleigh gave the amount, which is the largest-ever individual gift to the School of Pharmacy. Kerr's gift is a significant part of $5.1 million the school has raised since December 1, 1995 to fund the construction of the new building.

Banks Kerr, a 1943 graduate of the school, is retired founder and chief executive officer of the Kerr Drug Store chain. Kerr opened his first drug store in 1950 in Raleigh's Cameron Village shopping center. By 1995, when Kerr sold his chain of stores to Thrift Drug Inc., there were 97 stores, posting nearly $200 million in sales. The stores still carry the Kerr name, something Kerr specified in the sales agreement. He also pushed for and received a promise that the new Thrift chain would keep the Kerr employees.

"Banks Kerr is a person who has served his profession, community and state with distinction as an alumnus of the school for more than 50 years," said William H. Campbell, dean of the School of Pharmacy. "His pharmacies and pharmacists, many of them UNC-CH graduates, demonstrated professional and personal care. His gift continues this tradition and leaves a legacy that will benefit the profession and people of North Carolina for generations to come."

The new building will be a four-story, 65,000 square foot addition connected to the south end of Beard Hall, which houses the school. The building will provide state-of-the-art classroom and laboratory facilities, including the Pharmacy Telecommunications Center. This facility will provide interactive audio and video transmissions to all fiber-optic-connected locations on the UNC-CH campus, all North Carolina Information Superhighway locations and all Area Health Education Centers (AHECs). This facility and capability will be unique among the 79 schools of pharmacy in the United States and will create a pharmaceutical care classroom without walls.

Kerr used his gift to leverage the giving of other school alumni and friends. Shortly after the school began its building campaign, Kerr gave $1 million and then issued a $1 million challenge as an anonymous benefactor. To meet the challenge, other individual alumni and friends had to pledge $1 million by December 31, 1996. The challenge was met, meaning Kerr contributed $2 million and helped raise an additional $1 million.

The University and the school are seeking $10.2 million from the North Carolina General Assembly and hope to break ground in October 1997.

Kevin Almond, R.Ph., Assistant Dean, UNC School of Pharmacy

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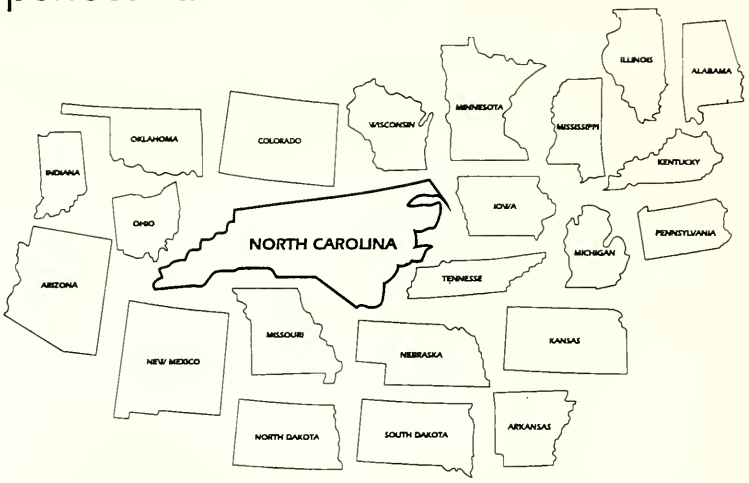

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Patient Counseling on Topical Analgesic Therapy for Arthritis Pain, Part 1: Introduction

Gossel

Wuest

Thomas A. Gossel, R.Ph., Ph.D.
Dean, and Professor of
Pharmacology and Toxicology
Ohio Northern University
Ada, Ohio

and

J. Richard Wuest,
R.Ph.,Pharm.D.
Professor of Pharmacy Practice
University of Cincinnati
Cincinnati, Ohio

Goals

The goals of this lesson are to describe the basis for arthritis pain, and discuss topical therapy for its treatment.

Objectives

At the conclusion of this lesson, participants should be able to:

1. exhibit an understanding of the factors that predispose to development of arthritis;
2. choose from a list, mechanisms involved in the pain of arthritis;
3. select OTC products that can be used topically in the treatment of arthritis pain;
4. identify the pharmacologic and toxicologic actions, uses and misuses, and therapeutic application of drugs used in the topical treatment of arthritis pain; and,
5. choose from a list, specific advice to convey to patients about the treatment of arthritis pain with topically-applied products.

A professional development program made possible by an educational grant from

SEARLE

According to the Arthritis Foundation, arthritis is a major cause of crippling disease. Affecting nearly 40 million Americans, more than one million new cases are diagnosed each year. It is reported that $35 billion is spent each year in health care costs and lost wages.

A variety of treatments are available that can modify arthritis pain and/or inflammation. There is currently no cure.

Even for conditions such as arthritis that can cause severe pain, patients may comply poorly due to side effects of their medication or because they forget to take a dose. For example, patients may use inadequate or excessive doses of medication. Arthritis pain also may not be managed adequately with systemic medication. Therefore, patients may turn to topical analgesic lotions and rubs to obtain relief with minimal adverse effects. Since these products are available without prescription, they can be obtained easily.

Pharmacists can be of major assistance in counseling patients with arthritis on the selection of appropriate topical products and proper use. Studies show repeatedly that when pharmacists take an active role in helping patients understand their disease process and the rationale for the prescribing of medication, compliance improves.

The physiologic mechanisms that cause arthritis pain, as well as drugs used topically to treat pain, are discussed in this lesson. Information to convey to arthritis patients to help them obtain maximal benefit from topical analgesic products is also included. The topic will be concluded in the second part of this two-part series.

Arthritis

The term *arthritis* (inflammation of a joint) refers to approximately 100 different inflammatory conditions that cause pain in joints and connective tissue. The most common forms are osteoarthritis and rheumatoid arthritis. Pain is a common complaint of both forms. It is important to briefly differentiate the two types.

Rheumatoid Arthritis. A chronic inflammatory autoimmune disease, rheumatoid arthritis afflicts an estimated two million Americans. It usually begins between ages 20 and 45. Three females are afflicted for every male. Rheumatoid arthritis appears in multiple joints, especially the hands and feet.

Rheumatoid arthritis is characterized by inflammatory changes in the synovial membranes and joint structures with bone rarefaction (diminution on density and weight but not volume). Deformity of affected joints and

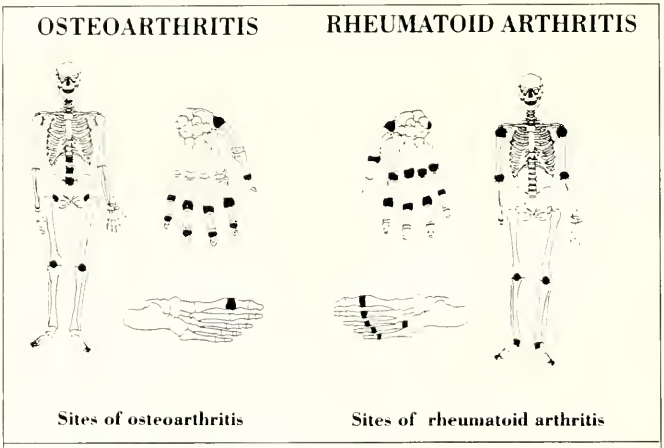

Figure 1. Sites of osteoarthritis and rheumatoid arthritis development.

tissue is common and can become extensive if the disease process is aggressive and is not treated properly.

Rheumatoid arthritis treatment goals include reduction of pain and inflammation. In addition, attention should be given to slowing the disease process with remission-inducing therapy. Rheumatoid arthritis patients must, therefore, receive medical attention and appropriate therapy.

Osteoarthritis. Osteoarthritis is a degenerative joint disease characterized by deterioration of the articular cartilage, bone hypertrophy at the margins, and changes in the synovial membrane. It is sometimes described as "wear-and-tear arthritis." Most osteoarthritis is noninflammatory, with loss of cartilage as the primary cause of disability. In 10 to 20 percent of osteoarthritis cases, swelling follows fragments of diseased cartilage that collect in the synovial space.

1. Unlike rheumatoid arthritis, osteoarthritis is not a systemic disease.

The incidence of osteoarthritis increases with age. As many as 80 percent of the population is reported in some studies to experience it by age 65. Osteoarthritis may also appear in younger individuals following joint injuries, such as those sustained in football and other contact sports, or as a result of a hereditary disorder.

The treatment of osteoarthritis includes reducing pain and minimizing further joint damage.

Causes of Joint Pain and Inflammation

Tissue destruction and/or joint inflammation are complicated processes that may be initiated by a large variety of chemical mediators. These include interleukin-1 (IL-1), IL-6 and IL-8, leukemia inhibitory factor (LIF), monocyte chemotactic protein (MCP)-1, and prostaglandins (e.g., PGE_2). Protease enzymes hasten tissue destruction. Neuropeptides, such as substance P, mediate neural effects on inflammation and connective tissue metabolism.

Substance P contributes significantly to the pain and inflammation of arthritis. This neuropeptide is found in unmyelinated fibers (type C) that innervate ligaments, tendons, joint capsules, and blood vessels in the synovium and in bone. These sensory nerves transmit pain signals upon exposure to noxious stimuli.

When tissue is damaged, the neurons fire, releasing substance P at nerve endings (in the skin or joint) and at synapses within the spinal cord. The nociceptor (a receptor which is stimulated by injury; a receptor for pain) message is sent to the brain and pain is felt.

Besides playing a major role in pain perception, substance P has pro-inflammatory functions. Substance P increases proliferation of synovial cells (synoviocytes), which can lead to excessive development of synovial tissue over the joint surface (pannus formation) and joint destruction in rheumatoid arthritis. Substance P stimulates synoviocytes to release PGE_2, which promotes inflammation, and collagenase which stimulates cartilage destruction. Macrophages from inflamed joints have been shown to synthesize and secrete interleukin-1 and TNF-alpha in the presence of substance P.

The causes of arthritis are numerous. Of paramount significance is that, regardless of its cause, pain is the symptom for which most patients with arthritis seek relief.

Treatment of Osteoarthritis Pain

Oral Medications. The most frequently used form of arthritis therapy is the nonsteroidal anti-inflammatory drugs (NSAIDs). Approximately 1 to 2 percent of Americans are believed to use NSAIDs regularly; many more, however, use them intermittently.

Effective analgesics in low-to-moderate doses and anti-inflammatory in larger doses, NSAIDs are not suitable for all persons. They can incite a number of adverse effects and can be toxic if misused. It has been estimated conservatively that between 2 and 4 percent of patients who take NSAIDs longer than two months experience potentially serious adverse reactions. Many of these people are elderly, and toxicity can be increased when they are on multiple drug therapy.

Besides using oral NSAIDs for treatment of osteoarthritis, physicians will prescribe other analgesics occasionally such as acetaminophen, or intra-articular corticosteroids. In addition, patients may self-medicate with OTC systemic analgesic products. Their reasons for

Table 1
Evidence for a Role of Substance P in Arthritis Pain

- There is an alteration in the innervation of joints of rheumatoid arthritis patients by substance P-containing neurons.
- Injecting substance P into joints in animals increases soft tissue swelling, decreases bone density, and increases joint space narrowing.
- Substance P levels in synovial fluid of joints afflicted with either osteoarthritis or rheumatoid arthritis are higher than plasma levels.

doing so are often related to financial considerations, including health insurance limitations. Many, though, do not wish to take the large or frequent doses of medication that may be necessary with OTC agents to treat their condition effectively.

Nonpharmacologic Approaches. Nonpharmacologic approaches to therapy include rest, application of heat and cold, physical therapy, and altering patients' lifestyle and work activity. These measures help relieve pain, and some may also delay further damage to affected joints.

The mechanism of action from heat and/or cold massage on joint and skeletal pain is not understood entirely. Several theories of how these may act to relieve pain have been proposed. Most likely, heat produces analgesia by elevating the pain threshold of peripheral nerve fibers. Cold may decrease the swelling that causes pain by minimizing vasodilation associated with inflammation. Ice or cold packs can be applied to the painful site for approximately 20 minutes and then removed. Leaving them in place for longer periods is not recommended.

For minor pain, heat can be applied with a heating pad or moist heat pack. Moist heat is considered the most effective method of application since moisture enhances the penetration of heat into joints and muscles.

Muscle pain can be managed with deep heat (thermotherapy, diathermy). This helps decrease muscle pain because it promotes restoration of elasticity to collagen. The most abundant protein in humans, collagen is a basic building constituent of tendons, ligaments and muscles. Collagen stretches like a coil and normally recoils to its natural length with normal movement. If injured by excessive stretching or injury, it may not return to its previous length, thus causing discomfort.

Heat and massage increase the flow of blood and lymph in the skin and underlying structures. This enhances delivery of oxygen and nutrients and removal of metabolic waste products. Heat can exert muscle relaxant and counterirritant activities.

Exercise is an important component of arthritis therapy to increase and maintain mobility and minimize pain. Controlled, purposeful exercise can increase the strength of muscles and other supporting tissues around a joint to promote greater range of motion.

Topical Analgesics

Externally-applied analgesics relieve the pain of musculoskeletal origin including arthritis. Topical therapy for arthritis has been used widely for centuries. Only recently has there been a scientific basis for some of these approaches. Discussion in this lesson and the next will be limited to ingredients in OTC products that soothe the aches and pain of arthritis, as well as provide analgesic relief to sore muscles, tendons, ligaments and bursae. Pharmacologic agents such as local anesthetics and skin protectants, which are also classed as external analgesics, will not be included.

Counterirritants. Inducing mild pain or other neural sensation voluntarily as a means to counter a more intense one is instinctive. For example, pain sufferers may bite their lips, clench their fists, massage their skin or dig their nails into their skin in order to reduce perception of more intense pain. Counterirritant drugs are applied to the site of pain for the same purpose. They are made up of a wide variety of chemical classes.

The therapeutic objective of counterirritant use is to provide analgesic relief to an area of the body by creating an alternative nociceptive response to pain. Counterirritants achieve this by producing mild, localized inflammatory reactions. The intensity of response is dependent upon the specific counterirritant and its concentration, the vehicle used, and the extent of contact with the skin. Mere massaging of the skin during product application can help suppress pain transmission. Some counterirritants may exert their "analgesic" action because of their pleasant (aromatic) odor that strongly suggests medical effectiveness. In other words, they smell "mediciney."

Although several theories have been advanced to explain the pharmacologic action of counterirritants, there is no unanimity of opinion. The summation of pain stimuli is one theory that has been proposed. It is based on the belief that counterirritants stimulate several receptors in the skin by inducing chemical signs of inflammation (i.e., heat, erythema and swelling). This mild stimulation obscures the painful stimuli that originates elsewhere in the affected joint or muscle. Counterirritation has been likened to the physiologic effects that are achieved with acupressure or acupuncture.

The summation of pain stimuli theory is supported by neuroanatomy and physiology factors. Stimuli emanating in skeletal muscle are conducted along nerve fibers in a common pathway with impulses from the skin. Both impulses converge in the same area of the spinal cord for transmission to the brain. By increasing the amount of dermal sensation, the individual's perception of joint or muscle pain can be decreased.

Some drugs possess rubefacient action in addition to counterirritant properties. This means they incite active vasodilation of the cutaneous vasculature, which brings more blood into the area. This, in turn, increases the skin temperature to result in a feeling of warmth and comfort.

Table 2
Classification of OTC Counterirritant External Analgesics

Group Characteristics	Ingredients	Concentrations
A Induce redness and irritation; more potent than other commonly used counterirritants	allyl isothiocyanate	0.5-5%
	ammonia water	1-2.5%
	methyl salicylate	10-60%
	turpentine oil	6-30%
B Produce cooling sensation; possess strong organoleptic properties	camphor	3-11%
	menthol	1.2516%
C Cause vasodilation	histamine dihydrochloride	0.025-0.1%
	methyl nicotinate	0.25-1%
D Incite irritation without rubefaction; equal in potency to Group A	capsicum	0.025-0.25%*
	capsicum oleoresin	0.025-0.25%*
	capsaicin	0.025-0.25%*

*containing capsaicin ingredients
Ref: *Federal Register* 44(234), 1979; 48(27), 1983

Counterirritants that have met FDA's therapeutic criteria for safety and efficacy and are, therefore, available in OTC external analgesic products are listed in Table 2. They are grouped into four chemical and/or pharmacologic categories that provide qualitatively different types and/or extent of irritation.

Group A drugs include the more potent counterirritants. These are strong irritants that cause erythema (redness) and warmth at the site of application. Group B counterirritants provide cooling and/or warmth and a tingling sensation to the skin. Their response, overall, may be due partly to their soothing medicinal odors.

Group C substances are vasodilators. Group D contains capsicum, capsicum oleoresin, and capsaicin. These substances reportedly provide counterirritant activity that can be as great as those in Group A, but without rubefacient properties.

Methyl Salicylate. Methyl salicylate is categorized in Group A of the counterirritant external analgesics. It occurs naturally as wintergreen oil or sweet birch oil. Synthetic methyl salicylate, the usual form in commerce, is prepared by the esterification of salicylic acid with methanol. It combines counterirritant action with prostaglandin inhibiting activity of salicylate. Very low concentrations of methyl salicylate have been used in candy, chewing gum, and other confections, due to its pleasant aroma and flavor.

Methyl salicylate has been the most commonly used counterirritant for the temporary relief of pain. The recommended topical dosage is a 10 to 60 percent concentration applied three to four times a day. It penetrates intact skin readily after topical application. There is evidence to suggest that sufficient amounts of methyl salicylate can be absorbed percutaneously to result in systemic analgesic activity. Because of this possibility, methyl salicylate should be used with caution in individuals who are sensitive to aspirin or who suffer from asthma or nasal polyps.

Patients should be told to avoid the use of heating pads or packs concurrently with methyl salicylate, or external analgesics in general, and to not apply them after strenuous exercise, especially during hot and humid weather. These conditions can magnify the extent of systemic drug absorption, and in the case of methyl salicylate have resulted in reports of severe adverse reactions. Methyl salicylate exhibits a safety profile similar to other salicylates.

Menthol. Menthol is a representative compound from Group B. It is a flavoring agent in a number of products that are taken internally when used in small quantity. For example, candy, chewing gum, cigarettes and cough drops may contain menthol flavoring. Inhaled menthol has also been used as a nasal decongestant.

In concentrations of 0.1 to 1 percent, menthol is used as an antipruritic agent. In higher concentrations (1.25 to 16 percent), menthol exerts counterirritant properties, in some cases merely replacing one sensation for another. When applied to the skin, menthol stimulates the neurons sensitive to cold while depressing nociceptive neurons.

Counterirritant concentrations of menthol applied topically produce a sense of coolness followed by a feeling of warmth. The sensation of cold is not due to actual cooling of the skin; menthol induces vasodilation, and the skin temperature at the site is actually warmer than other parts of the body. The counterirritant action of menthol differs, therefore, with the vehicle employed and the method of application.

Menthol can be used alone as an external analgesic. It is also combined with other ingredients such as camphor that have antipruritic or analgesic properties. Eucalyptus, thymol and other aromatic oils are added for their medicinal smell.

Methyl Nicotinate. Categorized as a Group C counterirritant, methyl nicotinate is applied three to four times per day in concentrations of 0.25 to 1 percent. It is a safe and effective counterirritant. Though nicotinic acid is inactive topically, esterification causes a marked increase in skin penetrability.

Vasodilation, erythema and an increase in skin temperature occur with topical application of methyl nicotinate. Changing the concentration does not change the rate of absorption, but does increase the intensity of the reaction.

Table 3
Patient Counseling on the Use of External Analgesics

- Wash your hands before applying this product.
- Cleanse the area of the skin to which the product will be applied with soap and water each time you are ready to apply the medicine, unless otherwise directed by your doctor.
- Apply a generous amount of product to the area, rub it in well, and massage the area for several minutes.
- Wash your hands after applying the medicine.
- Keep the medicine away from your eyes, mouth, broken or damaged skin, open wounds, cuts or scratches.
- Do not bandage the area unless you were directed to do so by your doctor.
- Do not use this medicine more frequently or in larger quantities than suggested by your doctor or pharmacist.
- If skin irritation develops, pain lasts longer than 10 days or redness is present, contact your doctor.
- Do not use this medicine on children under 12 years of age, unless directed by your doctor. Keep all medicines out of the reach of children. Read all labels before using this medicine.
- In case of accidental ingestion, call your doctor or poison control center immediately.

The vasodilatory action of methyl nicotinate can be blocked, at least in part, by prior application of ibuprofen or other NSAIDs, indicating that methyl nicotinate may induce vasodilation secondary to an increase in prostaglandin synthesis. When methyl nicotinate is applied over large body surface areas, generalized vasodilation can occur, and some individuals have experienced marked reductions in blood pressure, and syncope has developed as a result.

Counseling Patients on Topical Analgesics

Information to pass along to patients using topical analgesics is presented in Table 3. The topic of counseling arthritis patients on these products, including Capsaicin, will be continued in Part 2 of this lesson series.

Continuing Education Quiz

Patient Counseling on Topical Analgesic Therapy for Arthritis Pain, Part 1: Introduction

Please circle the correct answer. For information on how to submit this quiz for continuing education credit see the directions below.

1. Which of the following statements about rheumatoid arthritis is true?
   a. It is a chronic inflammatory autoimmune disease.
   b. It occurs in males to greater extent than in females.
   c. It occurs in only one joint at a time.
   d. It usually begins around the age of 50.

2. Which of the following is the chemical mediator that initiates tissue destruction and joint inflammation?
   a. Intrinsic factor
   b. Interleukins
   c. Interferons
   d. Intermoogliabop

3. Which of the following is most appropriate to tell a patient using an external analgesic?
   a. Apply a small amount, about the size of a dime.
   b. Do not rub the area after applying the medicine.
   c. Cover the area with an occlusive dressing to help penetration.
   d. Do not apply the medicine to broken or damaged skin.

4. The deformity caused by rheumatoid arthritis results in which of the following bone changes?
   a. Resorption
   b. Osteoporosis
   c. Rarefaction
   d. Osteomalacia

5. The condition referred to in question #4 results in diminution of all of the following EXCEPT:
   a. density.
   b. volume.
   c. weight.

6. The neuropeptide that mediates neural effects on inflammation and connective tissue metabolism is:
   a. substance A.
   b. substance D.
   c. substance G.
   d. substance P.

7. The term diatherapy refers to the application of:
   a. cold.
   b. drugs.
   c. heat.
   d. water.

8. Osteoarthritis is characterized by all of the following EXCEPT:
   a. deterioration of articular cartilage.
   b. bone hypertrophy at the margins.
   c. changes in the synovial membrane.
   d. severe systemic inflammation.

9. Methyl salicylate is a member of which of the following counterirritant external analgesic groups?
   a. Group A
   b. Group B
   c. Group C
   d. Group D

10. The group of counterirritant external analgesics referred to in question #9 exerts which of the following activities?
   a. Redness only
   b. Irritation only
   c. Both redness and irritation
   d. Neither redness nor irritation

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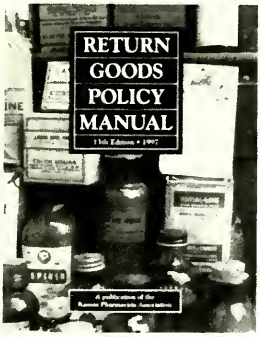
Position Available: Clinical Pharmacist/Faculty Member

Sampson Regional Medical Center and the UNC School of Pharmacy in conjunction with the Fayetteville AHEC are searching for a clinical pharmacist/faculty member to develop and provide pharmaceutical care services primarily in an ambulatory care environment and serve as a preceptor for Doctor of Pharmacy students from UNC. The successful applicant should have a Pharm.D. degree or equivalent with ambulatory care residency training or two years experience in clinical practice and be eligible for Board Certification in Pharmacotherapy. The candidate should have teaching and scholarship abilities and be eligible for licensure by the NC Board of Pharmacy. Good communication skills, patience, understanding and a caring attitude toward patients are essential. A working knowledge of Spanish is desirable. Sampson Regional Medical Center, located in Clinton, NC, will provide the practice base for the clinical pharmacist/faculty member. Practice sites include the hospital, a family medicine practice affiliated with the ECU Family and Medicine rural residency program, a rural health clinic in Roseboro and the hospital's home health agency. There will also be teaching responsibilities through the School of Pharmacy, FAHEC and the ECU Family Medicine program. The pharmacist faculty member will report to the Director of Pharmacy and in his absence to the Vice-President of the Hospital. The position includes faculty appointments at the UNC School of Pharmacy and the ECU School of Medicine. A letter of interest, curriculum vitae, and 3 letters of reference should be sent to: June McDermott, MS Pharm, MBA, Clinical Asst. Prof., UNC School of Pharmacy, CB# 7360, Beard Hall, Chapel Hill, NC 27599—919-962-2250. *Sampson Regional Medical Center is an EO/ADA Employer. Women and minorities are encouraged to apply.*



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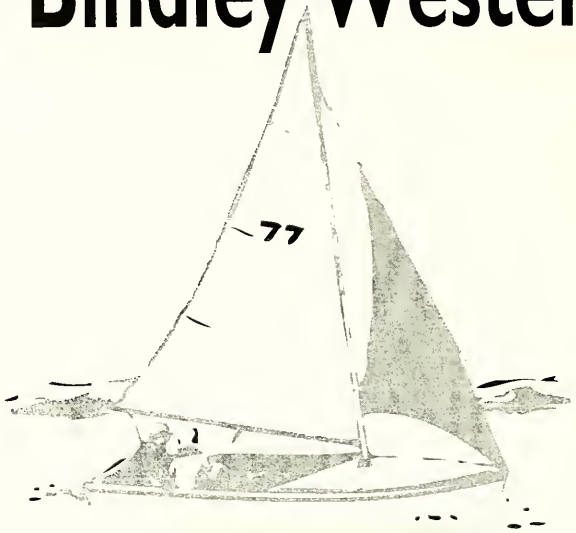

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CONTENTS

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Staff Communiqué

Jennifer A. Stamer, R.Ph.
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Several months ago, the NCPhA staff printed a journal survey in the September/October 1996 issue of the *Carolina Journal of Pharmacy* asking for your input on this publication. Efforts to listen and respond to your many suggestions and comments have resulted in this new and improved version of the Journal. However, in order to continue to satisfy your needs and wants, we invite you to write letters or call the Journal staff to request certain issues be addressed or to submit articles for publication. Your staff is working hard to make the *Carolina Journal of Pharmacy* a publication for its readers. Thank you for the many positive responses to the January/February issue. We appreciate your support.

In this Journal issue you will find NCPhA membership information along with an application form. We encourage you to share this literature with non-member co-workers and friends to increase and strengthen our membership. As an association that represents all facets of pharmacy, we must build upon our current membership to amplify our voice in pharmacy. Moreover, we must focus on diversifying our membership to truly represent pharmacy in North Carolina. This will consolidate and establish a continuity in our efforts to secure and enhance the profession of pharmacy. With this vision, we can accomplish greater tasks and make a much more pronounced impact on pharmacy in North Carolina, but we need your help! Please take a few moments to discuss the Association with your peers. Each new member ensures a greater offense in our fight to keep our profession strong.

Regarding the Pharmacy Practice Act Revisions, updates continue to change on a daily and sometimes hourly basis. We have received several phone calls requesting the latest information. As soon as we receive definitive information on this piece of legislation, we will collate a packet including the Pharmacy Practice Act Revisions according to legislative bill drafting and then another packet containing the final piece of legislation if passed. Please feel free to call Al Mebane or Jennifer Stamer with any inquiries on this matter.

The 117th Annual Convention of the North Carolina Pharmaceutical Association is right around the corner. The meeting will begin Wednesday, April 23, 1997 with a premeeting workshop day followed by four days of the meeting proper. Come and enjoy quality educational sessions and lively, entertaining social events while you network with colleagues. We expect a great crowd in Myrtle Beach, South Carolina and look forward to seeing you there. Remember, the convention is a great vehicle to introduce a friend to the Association.

NEW DRUGS APPROVED BY THE FDA IN 1996

The FDA cleared 53 new molecular entities (NMEs) in 1996—the most ever. For this chart, we listed the new drugs we think you might encounter. The front lists NMEs approved in 1996...and on the back of this page are some significant new dosage forms of previously approved drugs. Some of these drugs are not yet commercially available. Descriptions and advice about using the most significant products appear in the monthly issues of *Pharmacist's Letter*...and more detailed information is available by using the *PHARM-FaxBACK* system.

NEW MOLECULAR ENTITIES

BRAND	GENERIC	COMPANY	DESCRIPTION
Accolate	zafirlukast	Zeneca	Leukotriene receptor blocker for asthma
Allegra	fexofenadine	Hoechst Marion	Metabolite of terfenadine without its drug interactions
Alphagan	brimonidine	Allergan	Alpha-2 agonist eye drop for glaucoma
Aphthasol	amlexanox	Block Drug	Topical paste for aphthous ulcers (canker sores)
Aricept	donepezil	Eisai/Pfizer	Cholinesterase inhibitor for Alzheimer's disease
Astelin	azelastine	Wallace Labs	Antihistamine spray for seasonal allergic rhinitis
Avonex	interferon beta-1a	Biogen	Interferon that delays disability in multiple sclerosis
Camptosar	irinotecan	Pharmacia & Upjohn	Topoisomerase I inhibitor for colorectal cancer
Copaxone	glatiramer (copolymer-1)	Teva; Hoechst Marion	Agent for relapsing-remitting multiple sclerosis
Crixivan	indinavir	Merck	Protease inhibitor for AIDS
Cerebyx	fosphenytoin	Parke-Davis	Water-soluble phenytoin prodrug
Denavir	penciclovir	SmithKline Beecham	Topical antiviral for herpes cold sores
Differin	adapalene	Galderma	Topical retinoid for acne
Diovan	valsartan	Novartis	Angiotensin II receptor blocker for hypertension
Elmiron	pentosan polysulfate	Baker Norton	First oral therapy for interstitial cystitis
Gemzar	gemcitabine	Lilly	First new drug for pancreatic cancer in 30 years
Glyset	miglitol	Bayer	Second alpha-glucosidase inhibitor for Type II diabetes
Humalog	insulin lispro	Lilly	Faster onset and shorter duration than regular insulin
Hycamtin	topotecan	SmithKline Beecham	Topoisomerase I inhibitor for ovarian cancer
Levaquin	levofloxacin	Ortho	Single isomer of ofloxacin
Lipitor	atorvastatin	Parke-Davis	Potent statin to lower cholesterol and triglycerides
Maxipime	cefepime	Bristol-Myers Squibb	"Fourth-generation" injectable cephalosporin
Mavik	trandolapril	Knoll	ACE inhibitor for hypertension
Mentax	butenafine	Penederm	Topical antifungal for athletes foot
Merrem IV	meropenem	Zeneca	Carbapenem less likely than *Primaxin* to cause seizures
Monurol	fosfomycin	Forest/Zambon	Single-dose antibiotic for uncomplicated UTIs
Naropin	ropivacaine	Astra	First long-acting local anesthetic in 20 years
Nilandron	nilutamide	Hoechst Marion	Antiandrogen for prostate cancer
Norvir	ritonavir	Abbott	Protease inhibitor for AIDS
Orgaran	danaparoid	Organon	Heparinoid for prophylaxis of post-operative DVT
Patanol	olopatadine	Alcon Labs	For prevention of eye itching from allergic conjunctivitis
ProAmatine	midodrine	Roberts Labs	Alpha-1 agonist for orthostatic hypotension
Redux	dexfenfluramine	Interneuron; Wyeth	Serotonergic appetite suppressant for obesity
Remeron	mirtazapine	Organon	Alpha-2 and serotonin receptor blocker antidepressant
Retavase	reteplase, recombinant	Boehringer Mannheim	Simple to administer thrombolytic
Soriatane	acitretin	Hoffman-LaRoche	Oral retinoid for severe psoriasis
Taxotere	docetaxel	Rhone-Poulenc Rorer	Antineoplastic related to *Taxol*
Topamax	topiramate	Ortho	Adjunctive therapy for partial onset seizures in adults
Viramune	nevirapine	Boehringer Ingelheim	Non-nucleoside reverse transcriptase inhibitor for AIDS
Vistide	cidofovir	Gilead	Antiviral for CMV retinitis in AIDS
Xalatan	latanoprost	Pharmacia & Upjohn	Prostaglandin eye drop for glaucoma
Zagam	sparfloxacin	Rhone-Poulenc Rorer	Fluoroquinolone for respiratory infections
Zanaflex	tizanidine	Athena Neurosciences	First new drug for muscle spasticity in 20 years
Zyflo	zileuton	Abbott	Lipoxygenase inhibitor for asthma
Zyprexa	olanzapine	Lilly	Atypical antipsychotic without frequent blood tests

NEW DRUGS APPROVED BY THE FDA IN 1996

On the front of this page, we have listed the signilicant new drugs (new molecular entities) approved by the FDA in 1996. The following products are new dosage forms of existing drugs.

NEW DOSAGE FORMS OR DERIVATIVES

BRAND	GENERIC	COMPANY	DESCRIPTION
Amphotec	amphotericin B	Sequus Pharm	IV lipid formulation (cholesteryl sulfate complex)
Bactroban Nasal	mupirocin	SmithKline Beecham	To eliminate MRSA nasal colonization
Combivent	albuterol; ipratropium	Boehringer Ingelheim	Combination inhaler for COPD
Cytovene	oral ganciclovir	Hoffmann-La Roche	Prevention of CMV in solid organ transplants
DDAVP	desmopressin	Rhone-Poulenc Rorer	Tablet formulation for central diabetes insipidus
Depacon	valproate	Abbott	Injectable form of valproate
Estring	estradiol	Pharmacia & Upjohn	Vaginal ring for postmenopausal urogenital atrophy
Flovent	fluticasone	Glaxo Wellcome	Corticosteroid asthma inhaler
Fungizone Oral	amphotericin B	Bristol-Myers Squibb	Oral suspension of oral candidiasis
Gliadel	carmustine	Guilford Pharm	Implant that delivers chemotherapy to brain tumors
Lamisil	terbinafine	Sandoz	Oral tablets for fungal nail infections
Lexxel	enalapril; felodipine	Astra Merck	Combo for second-line treatment of hypertension
MUSE	alprostadil	Vivus	Urethral suppository for erectile dysfunction
Nascobal	cyanocobalamin	Nastech Pharm	Vitamin B12 nasal gel
Nicotrol NS	nicotine	McNeil	First nicotine nasal spray
Tarka	trandolapril; verapamil	Knoll	Combo for second-line treatment of hypertension
Teczem	diltiazem; enalapril	Merck	Combo for second-line treatment of hypertension
Tritec	ranitidine bismuth citrate	Glaxo Wellcome	Combo pill for *H. pylori* peptic ulcers
Vitrasert	ganciclovir	Chiron Vision	Eye implant for CMV retinitis in AIDS

Provided by:

PHARMACIST'S LETTER

2453 Grand Canal Blvd., Suite A, P.O. Box 8190 • Stockton, CA 95208
TEL (209) 472-2240 • FAX (209) 472-2249

Invest in your professional future for less than 38¢ a day

For less than 38¢ a day you can join the ranks of over 2,500 individuals across the state and nation who have chosen to support pharmacy through membership in the North Carolina Pharmaceutical Association (NCPhA). Through educational programming, lobbying efforts in the NC General Assembly, and publications NCPhA members are kept on the cutting-edge of issues and changes relating to pharmacy. In addition, NCPhA members are afforded the opportunity to participate in many cost-saving programs such as the ones listed below:

- *Discounts on quality educational programming*
- *Group insurance plans, including professional liability, major medical, whole and term life, disability income, and income replacement*
- *Group malpractice insurance*
- *Speaker assistance programs*
- *Pharmacy resource materials and more!*

Join today using the membership application on the opposite page and SAVE $$$ on your annual convention registration (details on page17)!

North Carolina Pharmaceutical Association

Application for Membership

Name (Mr. Mrs. Ms.) _____

Home Address _____

City _____ State _____ Zip _____ Home Phone _____

Business Name _____

Business Address _____

City _____ State _____ Zip _____ Business Phone _____

Preferred mailing address: ❑ home ❑ business

Membership Category

- ❑ Active Practice–*Pharmacist* $135.00
- ❑ Retired or Living Out of State–*Pharmacist* $67.50
- ❑ Joint Husband and Wife–*Pharmacists* $202.50
- ❑ Enrolled in Graduate or Professional School $25.00
- ❑ Associate Membership–*Non-Pharmacist* $135.00
- ❑ Life Membership $1350.00

Indicate with a ✓ your primary career area (✓ only one):

- ❑ Employee Independent
- ❑ Owner Independent
- ❑ Chain Management
- ❑ Employee Chain
- ❑ Staff Pharmacist–Hospital
- ❑ Director of Pharmacy–Hospital
- ❑ Clinical Pharmacist–Hospital
- ❑ Consultant
- ❑ Home Health Care
- ❑ Academia
- ❑ County Government
- ❑ State Government
- ❑ Federal Government
- ❑ Retired
- ❑ Relief
- ❑ Managed Care
- ❑ Other, list: _____

Pharmaceutical Industry:

- ❑ Executive
- ❑ Sales
- ❑ Research
- ❑ Pharm. Industry Other, list: _____

Payment Preference

❑ **Credit card**, Mastercard or Visa number: _____ exp. _____

Signature: _____ date _____

❑ **Check**, payable to NCPhA.

Return completed application with payment to:

NC Pharmaceutical Association, P.O. Box 151, Chapel Hill, NC 27514
phone: (919) 967-2237, fax (919) 968-9430

The North Carolina Pharmaceutical Association membership year runs January 1 to December 31. Rates indicated on this application are valid through December 31, 1997.

Highlights of the '97 NC Leaders Forum

Once again a successful Pharmacy Leaders Forum has come and gone as several of North Carolina pharmacy leaders gathered together for the traditional meeting in Southern Pines over Valentine's Day weekend. This annual meeting was born out of a suggestion from NC Board member Whit Moose over 12 years ago to provide a forum for pharmacy leaders to exchange ideas, opinions, and experiences regarding various pharmacy issues.

The premise of the 1997 Pharmacy Leaders Forum was to share predictions of what North Carolina pharmacy would look like in two years, and then in five years, as well as to discuss a broad assortment of other pharmacy topics. Each attendee prepared a few minutes of what he or she believed the future of pharmacy to be. The most creative response was that of Dean William Campbell from UNC School of Pharmacy as he did a little desktop publishing of his own. Using a *Wall Street Journal* template, he addressed such issues as unification of all pharmacists into a single national organization and the replacement of paper written prescriptions with internet driven prescription software to reflect his foresight into the near future.

Rob Farina (left) and Joe Whitehead

Other hot topics of the weekend were disease state management, whether or not to mandate that disgnoses/indications be required on prescriptions, the development of a managed care board, the revisions of the Pharmacy Practice Act and the new proposal addressing the make-up of the NC Board of Pharmacy to name a few.

Jennifer Stamer and Oren Peacock

Presentations from Pam Joyner, Director of External Professional Affairs at UNC brought the group up to date on the collaborations of the certificate task force. The certificate task force has completed their charge to establish standards for a certificate program which both schools of pharmacy will endorse. Dan Garrett, Pharmacy Director at St. Joseph's+Memorial Mission Hospital in Asheville also made an enlightening presentation on the recent incorporation and development of the North Carolina Center for Pharmaceutical Care. His comments sparked much excitement and discussion from the participants.

The leaders were also pleased to have participation from Campbell University pharmacy students, Brandon Taylor and Rob Farina and UNC pharmacy students, Alicia Barefoot and Angie Kendrick. Their comments were much appreciated and valued by all in the room.

Left to right, Bob Crocker, Bill Campbell and Jack Watts

Seeing is Believing:

Facsimiles Can Serve as a Safety Net for Pharmacists

Every pharmacist has had the queasy experience of calling a prescriber's office for a refill authorization and hearing the receptionist, or whoever answers the phone, respond with a phrase "Oh, sure that's okay." When one stops to think about it this leaves an uneasy feeling with the pharmacist suspecting that there is no record of this refill authorization in the prescriber's office.

This is often the case and investigator from the Board of Pharmacy have verified that in over half the cases there were absolutely no records in the office of telephone transactions. When pharmacists consider the amount of telephone activity, this is indeed disturbing.

In the past, the Board has had at least two cases where the key issue was "Were the refills authorized?" In one case, a prominent businessman in a small town had been taking Fiorinal and Valium regularly which had been prescribed by his physician. The pharmacist maintained that he had received refill authorization over many years for each of these products. The businessman visited his physician and received a prescription for another product that included 200 mg of Meprobamate. The patient had an immediate reaction resulting in a personality change and committed suicide within 30 days.

An investigation revealed no records whatsoever of any refills in the physician's office although the pharmacy had regular refills from the date of the first prescription. When asked if he had authorized the refills the prescriber said "I may have authorized some of those, but I know I didn't authorize all of them."

In another case an IBM engineer complained about the overuse of drugs by his elderly mother and claimed that a pharmacist was dispensing excess amount of prescriptions to her. The pharmacist claimed that all refills of Placidyl 500 mg. and Darvocet N 100 were authorized for this elderly woman by the physician's office nurse. The nurse denied it and a hearing at the Board of Nursing dismissed all charges against the nurse. The physician denied authorizing any refills saying that he didn't talk on the phone—he didn't even speak to his wife on the phone. There were no records in the physician's office of any refills on this medication.

From these two examples you can see the potential difficulties facing pharmacists who only have refill authorizations based on a telephone conversation. If for no other reason pharmacists should consider fax transmission of prescriptions and refill authorizations for their own protection. This is especially true with the new liabilities under the prospective drug use review sections of the federal and state rules on counseling. Documents in writing in the prescriber's own handwriting are also helpful to avoid possible errors on drugs which sound very much alike.

The Board's rule on patient counseling can be found at section .1807 of Board's rule (page 71 of the gold law book) that includes transmitting information, refill authorization, prescription transfer guidelines, readability of records, no additional charges for fax use and a prohibition on exclusive dealing arrangements. Pharmacies without fax capability need to consider this both for their own protection and to better serve the public.

The Board of Pharmacy column, a standing feature of the Carolina Journal of Pharmacy, is authored by David R. Work, Executive Director of the NC Board of Pharmacy.

Questions/Suggestions

Do you have an issue or topic you wish to see addressed in the Board of Pharmacy column? If so, send your request to the *Carolina Journal of Pharmacy*, P.O. Box 229, Chapel Hill, NC 27514.

117th Annual Convention of the NCPhA and Affiliated Auxiliaries

April 23–27, 1997

Myrtle Beach

SOUTH CAROLINA

Schedule

Wednesday, April 23

8:00 – 10:00 a.m.
Registration

10:00 a.m. – noon
"Understanding Medicaid"
2 hrs. ACPE# 088-000-97-003-L04
C. Benny Ridout, R.Ph.
Pharmacy Consultant
NC Division of Medical Assistance

noon Lunch *(for all day workshop participants)*

1:00 – 4:00 p.m.
"Avoiding Medication Errors"
3 hrs. ACPE# 088-000-97-004-L04
Susan M. Proulx, Pharm.D.
Vice President, Operations
Institute for Safe Medications Practices
Warminster, PA
sponsored by Bristol Myers Squibb

Thursday, April 24

8:00 a.m.
Registration

9:00 a.m. – noon
1st General Session
2 hrs. ACPE# 088-000-97-005-L02
"Combination Antiretrovial Therapy: Emphasis on Protease Inhibitors"
Joseph Eron, M.D.
Assistant Professor of Medicine
Co-director UNC-AIDS Clinical Trials Unit
Univ. of North Carolina at Chapel Hill
sponsored by Merck

Afternoon
Golf Tournament at Arcadian Shores Golf Club

Tennis Tournament

2:00 p.m.
WA Chef's Dessert Cooking Demonstration

9:00 p.m. – midnight
Joyce Hawley & Band
Raleigh, NC

Friday, April 25

8:00 – 8:45 a.m.
UNC Alumni Breakfast honoring
L. Milton Whaley recipient of the Distinguished Service Award

9:00 a.m. – noon
2nd General Session
2 hrs. ACPE# 088-000-97-006-L03
"Comments on Current Events in Pharmacy Law"
Walter Fitzgerald, R.Ph., M.S., J.D.
Associate Professor, University of Tennessee
sponsored by Glaxo Wellcome

9:15 a.m. *(buses load)*
WA Shopping at "Broadway at the Beach"
and onto an inland waterway cruise & lunch

12:15 – 2:45 p.m.
Exhibits and Lunch

3:00 – 5:00 p.m.
PharmPAC Meeting

5:30 p.m.
Awards Session

6:00 p.m.
Award Recipient's Reception

7:00 p.m.
Banquet
Ronald W. Hyatt, Professor
Physical Education, Exercise & Sport Science
Univ. of North Carolina at Chapel Hill
Keynote Speaker

Saturday, April 26

8:00 – 8:45 a.m.
Christian Pharmacists' Breakfast

8:30 a.m.
WA Coffee *(WA hospitality suite)*

8:00 – 8:45 a.m.
Kappa Psi Breakfast

9:00 – noon
Final Session
"Communication Dynamics: A Resource in Assuring Drug Quality"
1 hr. ACPE# 088-000-97-007-L04
Kimberly K. Wesmiller
FDA MedWatch Drug Quality Reporting System

"Certification Programs: The New Focus of Pharmacy"
1 hr. ACPE# 088-000-97-008-L04
Joseph A. Edwards Jr., R.Ph., FACA
President, Edward's Pharmacy
Raleigh, NC

9:30 a.m.
WA Business Session

12:30 p.m.
WA Luncheon, Fashion Show, & Installation of Officers

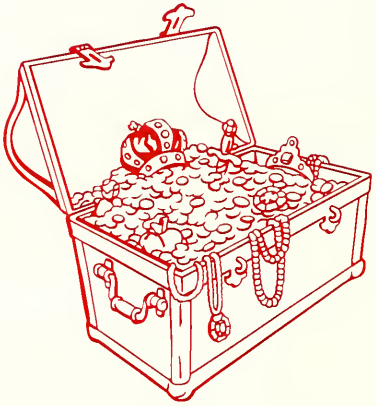
3:00 – 5:00 p.m.
Exhibits & "Make Your Own Sundae" Party

7:00 p.m. Country Music Concert/Show
(order now, limited # tickets)
featuring Patty Loveless
or
Ronnie Milsap

Sunday, April 26

9:00 a.m.
Convention Closing Breakfast

Adjournment



Treasure Chest

If you have the winning combination U–R–N–LUCK

Convention registrants be sure to get your "combination" at the NCPhA convention registration desk when you pick up your packet. If your combination opens the lock, you are the rightful owner of the contents. Participants may try their combinations to the lock at the NCPhA booth during the exhibit program on Saturday, April 26. *Good Luck!*

Myrtle Beach Hilton Oceanfront Golf Resort

Children's Activities

The NCPhA Convention hotel, the Myrtle Beach Hilton, has a children's activity program for ages 4–14. Special activities will be planned for our group for Friday and/or Saturday based on the number of people indicating an interest. If you would like more information regarding this program please call NCPhA at 1-800-852-7343.

Program Objectives

- Discuss the history of the Medicaid Program.
- Understand the "DESI" drug list and its effect on Pharmacy.
- Determine how the FUL (Federal Upper Limit) for drugs is determined and its impact on pharmacy reimbursement.
- Discuss the effects of managed care as it relates to total health care.
- List things that can be done to make the Medicaid Pharmacy program work better.
- Recognize the problems that contribute to medication errors.
- Initiate behaviors to prevent medication errors.
- Provide more effective care of patients.
- Reduce the likelihood of malpractice claims being filed.
- Understand the use of HIV-1 RNA levels in the atntiretroviral treatment of HIV.
- Understand the mechanism by which protease inhibitors block HIV replication.
- Understand the clinical benefits of potent antiretroviral combination therapy, including combinations that include protease inhibitors.
- Discuss legal issues currently impacting pharmacy.
- Increase the awareness of the FDA MedWatch Drug Quality Reporting System to pharmacists.
- Describe what a product problem is.
- Inform pharmacists how to report their drug quality concerns.
- Discuss pharmacist training for future reimbursement.
- Review ACA certification programs in asthma and diabetes.

Continuing Education

This four-day meeting will offer eleven hours of continuing pharmaceutical education credit. To receive CE credit, Attendance Verification Forms must be turned in at the conclusion of each program. ACPE certificates of participation will be mailed to all registrants upon completion of the CE Attendance Verification Form and evaluation of the meeting

This program provides eleven hours (1.1 CEUs) of continuing education. Continuing education will be provided by Campbell University. Campbell University is approved by the American Council on Pharmaceutical Education as a provider of continuing pharmaceutical education. Program numbers are 088-000-97-003 through 088-000-97-008.

Information

Program Coordinators:

Daniel W. Teat, Pharm.D.
Dir. of Continuing Education
Campbell Univ. School of Pharmacy

Alfred H. Mebane III
Executive Director, NCPhA

Jennifer A. Stamer
Associate Executive Director, NCPhA

Questions?

North Carolina Pharmaceutical Association
P.O. Box 151
Chapel Hill, NC 27514-0151
e-mail: meba3@aol.com

1-800-852-7343 or fax (919) 968-9430

117th Annual NCPhA Meeting
PROGRAM-AT-A-GLANCE

Thursday, April 24

8:00 a.m.
Registration

9:00 a.m. – noon
1st General Session

Afternoon
Golf and Tennis Tournaments

2:00 p.m.
WA Chef's Dessert Cooking Demo

9:00 p.m. – midnight
Dance

Friday, April 25

8:00 a.m.
Registration

8:00 – 8:45 a.m.
UNC Alumni Breakfast

9:00 a.m. – noon
2nd General Session

9:15 a.m. buses load
WA Shopping at "Broadway at the Beach"
& on to an inland waterway cruise & lunch

12:15 – 2:45 p.m.
Exhibits and Lunch

3:00 – 5:00 p.m.
PharmPAC Meeting

5:30 p.m.
Awards Session

6:00 p.m.
Award Recipients' Reception

7:00 p.m.
Banquet and Installation of Officers

Saturday, April 26

8:00
Registration

8:00 a.m.
WA Coffee Hour

8:00 – 8:45 a.m.
Christian Pharmacists' Breakfast

8:00 – 8:45 a.m.
Kappa Psi Breakfast

9:00 a.m. – noon
Final Session

12:30 p.m.
WA Lunch, Fashion Show, &
Installation of Officers

9:30 a.m.
WA Business Session

3:00 – 5:00 p.m.
Exhibits and Ice Cream Party

7:00 p.m.
Country Shows

Sunday, April 27

8:30 a.m.
Convention Closing Breakfast

PREMEETING WORKSHOPS
Wednesday, April 23

Don't have time to attend the full Annual Convention? Or do you want more education? We have planned two Premeeting Workshops to satisfy your needs. It is not necessary to be registered for the Annual Meeting to register for the Premeeting Workshops.

8:00 – 10:00 a.m.
Workshop Registration

10:00 – noon
Understanding Medicaid

noon – 1:00 p.m.
Lunch

1:00 – 4:00 p.m.
Avoiding Medication Errors
Sponsored by Bristol Myers Squibb

Convention Registration Form

117th Annual Convention of the NCPhA and Affiliated Auxiliaries

Instructions/Special Information:

Complete Sections A-E. Payment must be submitted at the time of registration. Convention registration is required to attend any function. Reservations must be made for all functions *(see Section D)*.

Section A: Meeting Registration *(print clearly)*

Last Name _____ First Name _____

Spouse/guest _____

Name for Badge _____ / Name for spouse/guest badge _____

Address _____

City,State,Zip _____

( ) _____ ( ) _____

Home Telephone Business Telephone

Is this your first NCPhA Convention? [ ] yes [ ] no

Section B: Registration Fees

CATEGORY	FOUR DAY	TH	FRI	SAT	SUN	
✔ *appropriate category*		*circle day(s) attending*				
❒ NCPhA Member	$136	$55	$55	$35	$16	____
❒ WA Member	$71	$10	$30	$25	$16	____
❒ TMA Member	$96	$35	$35	$20	$16	____
❒ Non-Member	$191	$75	$75	$55	$16	____
❒ Spouse/Guest	$96	$35	$35	$30	$16	____
❒ Exhibitor	$51	$35	comp.	comp.	$16	____
❒ Pharmacy Students	–NO REGISTRATION FEE–				$16	____

"Section B" TOTAL $ ____

Section C: Registration For Premeeting Workshops on Wednesday

It is not necessary to be registered for the Annual Convention to participate in the Premeeting Workshops.

Please ✓ the workshop(s) you want to attend:

❒ 10 a.m.–noon Understanding Medicaid

❒ 1 –4 p.m. Avoiding Medication Errors ❒ Both Sessions *(includes lunch)*

	morning only	afternoon only	all day *includes lunch*	
❒ Member	$25	$35	$60	____
❒ Non-Member	$35	$45	$75	____

"Section C" TOTAL $ ____

Section D: Events/Special Fees

Refer to Convention Program for specific times for events

Please indicate events you plan to attend.

REG=Included in Convention Registration

# tickets	*Event /Day of Event*		
____	1st General Session–*Thurs.*	REG	
____	Golf Tournament–*Thurs*	$30	____
____	Tennis Tournament–*Thurs.*	REG	
____	WA Cooking Demo–*Thurs*	$10	____
____	Dance–*Thurs*	REG	
____	UNC Alumni Assn. Breakfast–*Fri*	$13	____
____	*WA Shopping/Luncheon–*Fri*	REG	
____	2nd General Session–*Fri*	REG	
____	Exhibits/Luncheon–*Fri*	REG	
____	Awards Session–*Fri*	REG	
____	Award Recipients' Reception–*Fri*	REG	
____	Banquet–*Fri*	$35	____
____	Kappa Psi Breakfast–*Sat*	$13	____
____	Christian Pharmacists' Brkft–*Sat*	$13	____
____	*WA Business Meeting–*Sat*	REG	
____	*WA , Luncheon, & Installation of Officers, Fashion Show–*Sat*	REG	
____	Final Session–*Sat*	REG	
____	Exhibits/Ice Cream–*Sat*	REG	
	Country Shows–*Sat*		
____	*Ronnie Milsap*	$25	____
____	*Patty Loveless*	$35	____
____	Closing Breakfast–*Sun*	REG	
____	WA Membership Dues	$12	____

"Section D" TOTAL $ ____

**Must be registered as a Woman's Auxiliary member to attend*

Section E : Payment

Add together "Sections B, C, & D's Total" and enter the amount on the line below

PAYMENT TOTAL $_____

Method of payment *(✓ appropriate answer)*

❒ Check enclosed made payable to NCPhA

❒ Visa ❒ Mastercard

Card # exp. date

Card Holder's Signature

CANCELLATION POLICY: Cancellations must be in writing and postmarked no later than April 15. Registration refunds will be assessed a $15.00 cancellation fee. No refunds will be made after April 15.

Return completed registration by April 10 to: NCPhA, P.O. Box 229, Chapel Hill, NC 27514-0229

credit card users **(919) 968-9430 fax** **Questions? Call NCPhA 1-800-852-7343**

TEN COMMANDMENTS

for

Retail Pharmacy Buying Groups

I. THOU SHALT NOT BE PRIVATELY OWNED

PACE ALLIANCE is owned by fifteen State Pharmacy Associations or Affiliated Organizations.

II. THOU SHALL BE LARGE

PACE ALLIANCE is the largest retail pharmacy buying group in the United States.

III. THOU SHALL HAVE COMPETITIVE PRICES ON GENERIC DRUGS

PACE ALLIANCE has the lowest prices on generics in the market place.

IV. THOU SHALL HAVE CONTRACT PRICES ON BRAND NAME DRUGS

PACE ALLIANCE leads the Retail Buying Group Industry in the acquisition of contract pricing on branded items.

V. THOU SHALT NOT BE A "HERE TODAY, GONE TOMORROW OPERATION"

PACE ALLIANCE has been in operation since 1985.

VI. THOU SHALL BE ABLE TO SUPPLY THE CONTRACT ITEMS

PACE ALLIANCE contracts only with drug companies who have high fill rates.

VII. THOU SHALL HAVE HIGH QUALITY PRODUCTS

PACE ALLIANCE includes only drug companies with proven quality.

VIII. THOU SHALT NOT CHANGE DRUG COMPANIES EVERY YEAR

PACE ALLIANCE awards most products to the same drug companies year after year for program continuity.

IX. THOU SHALT NOT USE DIFFERENT SUPPLIERS FOR DIFFERENT PACKAGE SIZES

PACE ALLIANCE awards most products to the same drug company in all package sizes for program consistency.

X. THOU SHALL CONTRACT WITH DRUG COMPANIES WHO MAKE THEIR OWN PRODUCTS

PACE ALLIANCE gives preference to drug companies who make their own products.

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Across the State

Cary—Terrence Burroughs was recently appointed to Wake County's new Human Services Board, which replaces separate panels for health, mental health, and social services. Burroughs was appointed to the 25-member board which began its duties in December. Terrence is manager of pharmacy at Wake Medical Center. In addition, he holds a master's degree in business and is president of Burroughs Assests Management Company, a registered investment advisory firm.

BIRTHS

Wilmington—Keith and Jane Elmore announce the birth of a daughter, Sarah Katherine, born on January 28 weighing 4 lbs. 3 ozs.

OBITUARIES

Princeton—Barney Paul Woodard Sr., 82, died February 15. Woodard was very active in serving his community—professionally, socially and politically. Woodard received his pharmacy degree in 1938 and has owned and operated Woodard Drug Store for 54 years. He was a longtime member of the NCPhA and a recipient of the 1988 Pharmacist-of-the-Year Award. Woodard served in the House of Representatives for 20 years. His community involvement included master of St. Patrick Lodge, past president and current member of the Lions Club, past president of the Johnston County Shriners, member of the Board of Advisory Council for Princeton School for 16 years of which 4 years he was chairman, a member of the Board of Directors of Princeton Branch Banking and Trust, and past member of the Princeton Town Commissioners. He was a member of the Princeton United Methodist Church where he served in many capacities including teaching Sunday School.

Editor's Note: Tom Burgiss is a longtime pharmacist and NCPhA member. Tom is also a past president of NCPhA and a recipient of the Association's Pharmacist-of-the-Year Award. Tom and his wife Nancy operate a bed and breakfast in Laurel Springs, located near Sparta, North Carolina.

Below, Tom shares just what he's up to these days via the Burgiss newsletter.

Tom and Nancy bid everyone hello during a recent trip to Doolin, Ireland

What has happened to Burgiss?

Well, I am still around with my pharmacy license in a drawer, and the drawer is closed!

At the New River Mountain Music Jamboree I see smiling faces come into our door and even a bigger smile as they leave in contrast to seeing a frowning sick face enter the door of my old pharmacy and leaving with a bigger frown as they learn the price of the prescription! Believe it or not, dancing to a fast tune takes the folks off disability faster than all the muscle relaxers ever made. By the way, *National Geographic* was in this past summer taking shots for a story on New River and maybe you'll see some shots of our place, since you've never been here to enjoy our new life!

Just got back in November from touring Ireland again with our youngest son and his wife (Nancy and I are now giving a gift of trips to our children). Stayed in B&B's and touring by car...I love to drive on the left side of the road...sorta suits my personality doesn't it?

B&B business stays booked up as much as we will allow it. I have a web page http://users.com.aol/TBurgiss/bbhome.htm and it brought us international guests. E-mail is very active at TBurgiss@aol.com. I have all my children now on e-mail, and we can go in a private chat room on Sunday night and have a round robin conversation! It is great to be a part of this modern world.

My hobbies now include (besides skiing) mountain biking all over these mountains that surround us. The longest trip so far has been 44 miles! And then of course, travel is one of my things, so this January, February and March we are heading west. We will be gone for the these 3 months to ski in Colorado, see national parks and enjoy the southwest sun in New Mexico, Arizona, and Texas. For the past three years we have stayed on South Padre Island near Corpus Christi, Texas. My secret? Marry rich! And, draw your Social Security! Nancy says hello to all!

Nancy and Tom Burgiss

Discovering the Truth: Consolidating Mutual Fund Holdings

by Bruce Kramer, Investment Executive, Paine Webber

Perception: The more mutual funds you invest in the better. By holding 20 or more funds (from several different fund companies) you will reduce your risk and increase your total portfolio return.

Reality: Investors who hold too many funds can lose control of their portfolios, increasing their risk. Consolidating the number of funds they hold may allow these investors to realize some valuable benefits.

We spend a lot of time thinking about money. Investing in particular can be a time consuming project, especially with the more than 3,500 mutual funds available to choose from. Investors are going to have to make some difficult decisions about what to buy and what to sell to create a balanced portfolio.

Unfortunately, what happens to many people is that they keep deciding to buy, but never decide to sell. Maybe they start out with 5 or 6 funds. But whenever they hear about a top performing fund they buy it without selling anything. Eventually, they end up with 15, 20 or sometimes even more funds. And, while most experts agree that investors benefit from some diversification (spreading money among several investments), these investors have probably gone too far.

Too much of a good thing

It is possible to own many good mutual funds, and yet not have the combination add up to a good mutual fund portfolio. In fact, the more funds someone holds, the more likely this will be the case. Investing in too many mutual funds can expose investors to the following:

•Losing track of investments – Investors should always understand their various options and holdings. But the more funds you own, the harder it is.

•Lacking an overall investment strategy – Most people that end up with excessive funds tend to invest with more than one financial advisor or invest on their own. Often in these cases no one is aware of the total portfolio and how the holdings work together.

•Overlapping investment objectives – The more funds you buy, the more likely you are to buy funds in the same asset class, in which case you have not reduced your risk to the extent you may believe.

•Conflicting transactions – When an investor holds a high number of funds, those funds may be working at odds – one fund buying a security that another fund is selling.

•Diluting returns – Diversification reduces your risk but it can also reduce your return by lessening the impact of any single fund's good performance.

The benefits of consolidation

Investors with over extended portfolios should consider whittling their investments down to 2 or 3 fund families, with a maximum of 5 to 8 funds in all. By consolidating portfolios, investors may gain several advantages:

•Eliminate the urge to chase the hottest fund – Chasing top funds without selling past purchases leads to an overloaded portfolio without direction.

•Better use of available services – Most fund families offer a variety of services, including auto-invest, telephone transfers, retirement plans, and investment newsletters. With less fund groups to interact with, you can take better advantage of these services.

•Free exchanges–This service allows you to move from one investment to another within a fund family without incurring any new service charges (these exchanges may be treated as taxable events).

Ironically, mutual funds were intended to provide investors with simplicity, instant diversification and an easily assembled portfolio. However, by buying too many funds, some investors have recreated the problem mutual funds were intended to solve.

Mr. Kramer has been an investment executive since 1979. He has been writing articles for numerous pharmacy associations since 1989. He also appears as a program speaker at many annual meetings. He can be reached at 800-446-0311.

News Clips

Crixivan® Briefing

Merck's new HIV protease inhibitor, Crixivan®, has taken the spot-light since its unprecedented 42 day New Drug Application was approved by the FDA on March 14, 1996. Due to Merck's limited supplies of indinavir sulfate (Crixivan®), the manufacturer primarily supplied the drug to a mail order pharmacy based out of Pittsburgh–Stadlanders Pharmacy. However, after pharmacists voiced their concerns that a mail order firm should not be the primary distributor of an AIDS drug that demands proper patient counseling and monitoring, Merck began developing a new expanded distribution system.

On February 21, 1997 Merck announced their *Expanded Distribution Program* for Crixivan®. According to Merck, all pharmacists will receive a detailed letter explaining the program and how they can participate. For additional program details, please call toll free 1-888-CRIXIVAN.

Hats off to Pharmacists

Once again the American people have named pharmacists as the most trusted professionals with a 64 percent Gallop poll rating. Pharmacists have lead the Gallop poll ratings for the last eight years as consumers are asked each year to rate the honesty and ethical standards of 26 occupations.

Breast Cancer and New Technology

Martin Yaffe, a biophysicist from the University of Toronto, has dedicated the past ten years of his career to developing a new mammography technique. This sophisticated technique called digital mammography has clear advantages over the conventional X-ray mammography technique. The X-ray technique uses black-and-white imaging to indicate the various radiation absorption levels of different biological structures, thereby identifying the density and make up of the tissue. However, X-ray mammography does not pick up on slight tissue variations; it is used more as a gross tissue indicator. Yaffe's technique uses digital coding that differentiates between subtle tissue variations making his technique more precise than the X-ray.

Generic Lomotil Shortage

The generic antidiarrheal drug diphenoxylate HCl with atropine sulfate has been hard to come by this winter season as generic suppliers have been faced with shortages on one of the raw ingredients, diphenoxylate HCL. In a response to the problem, Searle has increased its supplies of their brand name drug, Lomotil.

Changes in the Continuing Pharmaceutical Education (CPE) Program

The increasing number of CPE program approval requests submitted to the NCPhA over the past several years has necessitated that a $10 administration fee accompany each CPE program approval request form. This fee went into effect on January 25, 1997 and does not include the cost of issuing CPE participant certificates. Since the CPE criterion's creation in 1982, the CPE certificate fee has remained $2. The NCPhA has taken great pride in being able to keep this fee fixed for almost fourteen years, however, we have reached a point where we must increase the CPE certificate fee to $4 in order to defray the increased cost of supplies.

To receive a CPE program approval form or for more information about the program call Jennifer Stamer at the NCPhA office at 800-852-7343. Thank you for your cooperation and understanding.

FDA Requests Supplemental New Drug Applications for Oral Contraceptives Used as Emergency Contraception

In efforts to safeguard patients and physicians, the FDA is appealing to manufacturers of oral contraceptives to submit *supplemental New Drug Applications* for these products when used as emergency contraception, better known as the morning after pill. This FDA request would make current "off label" uses of products an official part of the product's labeling. These efforts are consistent with the FDA's commitment to improve the amount of information available to patients and health care providers.

Patient Counseling on Topical Analgesic Therapy for Arthritis Pain, Part 2: Capsaicin and Patient Advice

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Gossel

Wuest

Goals

The goals of this lesson are to describe the action of topical analgesics in alleviating arthritis pain with focus on capsaicin, and discuss information to convey to patients when counseling them on these products.

Objectives

At the conclusion of this lesson, participants should be able to:

1. choose from a list, the mechanisms involved in arthritis pain;
2. select OTC products that can be used topically in the treatment of arthritis pain;
3. identify the pharmacologic and toxicologic actions, uses and misuses, and therapeutic application of capsaicin; and,
4. choose from a list, specific advice to convey to patients about treatment of arthritis pain with topically-applied products.

This is the second of a two-part series on the use of topical analgesic therapy for arthritis pain. Part 1 discussed the physiologic and pharmacologic basis for arthritis pain and differentiated between rheumatoid arthritis and osteoarthritis, the two most common forms of arthritis. It began a discussion of drugs that are applied topically to treat this pain.

This lesson continues with a thorough discussion of one of the currently popular topical analgesics, capsaicin. It concludes with advice to convey when counseling patients on arthritis pain and the use of topical analgesic products.

Capsaicin relieves the pain of arthritis and musculoskeletal disorders effectively, as well as pain associated with neuralgias (pain felt along the course of a nerve). It is related chemically to eugenol, the substance that gives clove its odor. Therapeutic uses for capsicum were first described in 1494. It was recommended as early as 1850 as a treatment for toothache.

Capsaicin is the predominant active ingredient of capsicum, a constituent of red chili peppers and fruit of plants of the *Solanaceae* family which also includes potatoes, tomatoes, and the night-shades. It is the pungent constituent that gives Tobasco its *hot* taste. Interestingly, solanaceous plants do not include those from which black pepper or pimento are obtained. Biting into a hot chili pepper produces powerful stimulation of local sensory receptors in the mucous membranes. Weak solutions of capsaicin cause a sensation of warmth when applied topically. Highly concentrated solutions, on the other hand, can provoke intense pain.

The term capsaicin does not confer the same meaning as capsicum or capsicum oleoresin. While capsaicim is the most potent and predominant chemical entity in capsicum, some of its other constituents are believed to be directly antagonistic to the pharmacologic effects of capsaicin. Additionally, capsaicin is present in only minute amounts in capsicum oleoresin. Table 1 outlines the relationship between capsaicin.

Mechanism of Action. Capsaicin exerts its pharmacologic action by depleting substance P from unmyelinated, slow-conducting "type C" nociceptive fibers (neurons that transmit pain impulses from the site of tissue injury to the brain). Capsaicin has specific affinity for primary afferent nociceptive neurons. It does not deplete substance P in myelinated, fast-moving A fibers or motor neurons. Thus, it reduces pain perception without modifying other nervous system processes significantly. To review, substance P is a peptide distributed widely in sensory nerve fibers, as well as in dorsal root ganglia and the dorsal horn

Table 1
Relationship Between
Capsicum, Capsicum Oleoresin
and Capsaicin

Capsicum
- The parent compound of a group of vanillyl fatty acid amides
- Obtained from the seeds and membranes of plants of the genus *Capsicum* from the family *Solanaceae*, including the common red pepper plant

Capsicum Oleoresin
- Also called capsaicin oleoresin
- The crude, dark reddish-brown liquid extract of capsicum; contains over 100 volatile compounds, including alcohols, carbonyls, carboxylic acids, terpenes, and miscellaneous noxious chemicals, some of unknown chemical identity
- Its use is unpredictable; some constituents have variable efficacy, including actions antagonistic to capsaicin

Capsaicin
- A naturally occurring alkaloid extracted from red chili peppers following a 1000-fold purification process
- A pure white crystalline constituent, and the parent compound from capsicum oleoresin
- Its pharmacologic action is to deplete substance P from sensory neurons

of the spinal cord. It is a powerful vasodilator, and believed to be the principal chemomediator of pain in the peripheral nervous system.

Capsaicin mediates changes in permeability across afferent C-fiber membranes, resulting in initiation of an impulse. Substance P is released and stimulates the initial pain response. With repeated application of capsaicin, the synthesis of substance P is diminished and eventually depleted from the neuron. Capsaicin can deplete substance P throughout the entire length of the neuron. This depletion renders the neuron insensitive to physiochemical stimuli. Axonal response to noxious electrical stimulation is reduced, and pain transmission is lessened, then eliminated. Continuous use of capsaicin is necessary to maintain a depleted neurotransmitter state. Substance P returns to pretreatment levels after exposure to capsaicin is terminated.

Capsaicin is the most effective means to deplete substance P that has been identified to date. There are no known changes in levels of other neurochemicals.

Efficacy in Arthritis Pain Shown in Clinical Trials. A double-blind, placebo (vehicle)-controlled study of topical capsaicin 0.025 percent demonstrated that, when compared to the vehicle, capsaicin relieved pain due to osteoarthritis and rheumatoid arthritis significantly. Patients with osteoarthritis (n = 70) or rheumatoid arthritis (n = 31) of one or both knee joints were randomized into a double-blind, placebo-controlled multi-center study. Patients received treatment with capsaicin 0.025 percent or placebo (vehicle cream) to the affected knee joint four times daily for four weeks. All patients had moderate-to-severe pain at the beginning of the study and were permitted to continue with their oral arthritis medication. Application of other topical medication was prohibited beginning seven days before the study and continued to the end.

Capsaicin-treated patients in both the osteoarthritis and rheumatoid arthritis groups experienced significant reduction in pain after one week of treatment, compared to the vehicle-treatment group. Patients who had disability in walking, working, driving, or sitting at the beginning of the study experienced significant improvement in those functions after four weeks of treatment with capsaicin. This improvement was statistically significant compared to that seen in the patients treated with vehicle cream. Similar results have been demonstrated in another study of patients with osteoarthritis of the hand. No systemic side effects or drug interactions were reported.

Topical capsaicin treatment may also affect inflammation as well as pain by reducing levels of substance P released at nerve endings. Experimental evidence shows that topical capsaicin treatment of arthritic knees reduces substance P and PGE_2 levels in synovial fluid.

Concentrations of capsaicin less than 0.1 percent are effective at providing pain relief. These smaller concentrations have the advantage of producing a milder acute response to each application, and reduced risk of discomfort if contaminated fingers are touched to the conjunctiva or mucous membranes. Strengths of 1 percent or higher produce discomfort and thermal hyperalgesia (i.e., an exaggerated painful response to heat). Higher capsaicin concentrations are also likely to produce possible deleterious effects. Various tests of sensation have failed to demonstrate evidence of temporary or permanent loss of cutaneous sensory nerve function. Its effects are reversible in human skin. It does not affect sympathetic vasoconstrictor tone.

The precise course of therapy is not defined. Capsaicin must be applied chronically, not "prn," although the precise course of therapy is undefined. Pain relief may be noted within a few days, but occasionally it will require a month or more of therapy before maximal pain relief is attained. One product's manufacturer recommends that therapy be continued without interruption for several months after the patient has experienced substantial analgesic benefit. Onset of pain relief is dependent on individual physiology and the painful condition treated.

Adverse Effects. Adverse effects include burning, stinging and mild erythema which normally diminish with repeated application. These are localized to the site of application. About 40 percent of arthritic patients experience transient burning. However, burning and other symptoms of discomfort usually decline after one to two weeks of therapy with regular use of the cream. Clinical trials demonstrate that long-term use of capsaicin

does not result in development of adverse effects.

In the early stages of treatment, burning may be minimized by pretreating the area with a local anesthetic ointment such as 5 percent lidocaine prior to application of capsaicin. Alternately, the product can be applied to a smaller area. A systemic analgesic may be taken for the first few days into therapy. Table 2 contains patient advice to maximize the therapeutic response of topically-applied capsaicin-containing products. Table 3 lists products that contain capsaicin.

Capsicum, capsicum oleoresin and capsaicin should not be confused. Products labeled as containing capsicum, capsicum oleoresin or capsaicin oleoresin have not been demonstrated to have equivalent therapeutic action to those containing purified capsaicin.

Combination Products. The combining of two or more active ingredients to produce a desired outcome is therapeutically rational. External analgesic products can include up to four ingredients, provided that each one is selected from a different pharmacologic group. It is irrational for a manufacturer to combine counterirritants with topical analgesics or antipruritics, local anesthetics or skin protectants. As mentioned earlier, a patient can apply a local anesthetic to the skin prior to use of a capsaicin-containing product to help nullify irritation induced by capsaicin.

Some counterirritants may have different actions at various concentrations. To illustrate, in concentrations that are greater than 1.25 percent, menthol excites sensory receptors by counterirritant action. In concentrations less than 1 percent, it depresses cutaneous pain receptors directly, thereby exerting topical anesthetic properties similar to phenol and other alcohols. Certain esters of salicylic acid also exhibit similar activity.

Other Common Topical Ingredients. The FDA has stated that topical formulations of aspirin and other salicylates, eucalyptus oil and triethanolamine salicylate are safe. However, there is insufficient evidence to evaluate their effectiveness as OTC external analgesics.

Table 2
Patient Information for Capsaicin-Containing Products

- Wash your hands thoroughly with soap and water before and after applying this product.
- Massage a small amount of the cream into your skin. Apply it to the entire painful site.
- Apply this product three to four times a day. Continue treatment without interruption, even though your pain is gone.
- You may experience pain relief in a few days, but optimal relief may take two or more weeks. Keep using the product according to the directions. If you have questions about this product, ask your doctor or pharmacist.
- This product is for external use only. Do not get it in your eyes, or use it on mucous membranes or broken or irritated skin.
- This product may cause burning, stinging and/or itching when first beginning therapy. This is normal and it will not harm you. The sensation should occur less intensely with repeated application. Exposure of the treated area to water (showering, perspiration) may cause the burning to intensify.
- If symptoms persist longer than 14 days, or if your condition worsens with this product, or clears and then recurs again within a few days of continued use, discontinue use and consult a doctor.
- Do not use this product on children under two years of age unless advised and supervised by a doctor.
- Products containing capsicum or capsicum oleoresin are not the same as products containing capsaicin. There is no evidence that capsicum or capsicum oleoresin-containing products provide the same benefit as those containing capsaicin.

Therapy With External Analgesic Products. External analgesic products are effective for a wide variety of afflictions such as aches and pains associated with arthritis and other musculoskeletal disorders. They are suitable when localized pain relief is appropriate, and may be used alone or as an adjunct to systemic therapy.

Safety of External Analgesics. External analgesics are absorbed across the skin minimally when used as directed. They are, therefore, safe. If ingested, however, some may be extremely toxic. They should be kept out of the reach of children.

Intense skin damage with blistering may follow excessive rubbing of the area or bandaging tightly. Some persons may be sensitive to ingredients and develop a rash that can be difficult to distinguish from erythema caused by excessive rubbing. If a rash or irritation appears, the product should be discontinued immediately and the area washed and rinsed thoroughly.

Advising Patients on Treatment of Arthritis Pain with Topical Analgesic Therapy

Patients should be educated on the proper use of external analgesic products. Since these products are available without prescription, patients will probably request information from a pharmacist more commonly than from a physician. Only 38 percent of Americans are reported, in one study, to obtain their information about arthritis from physicians. Since pharmacists are a valuable resource for arthritic patients, their advice can help patients get the most benefit from their analgesic therapy.

When pain is lessened, a person with arthritis may be able to perform activities of daily living better. Reduced pain may make it easier to exercise and lose weight, and lessen muscle strain. Patients with arthritis should be cautioned against overexertion which may contribute to further joint damage.

Table 3
Representative Products Containing Capsaicin

Trade Name	Dosage Form	Strength
Capsin	lotion	0.025%, 0.075%
Capzisin	cream	0.025%
No Pain-HP	roll-on	0.075%
R-Gel	gel	0.025%
Zostrix	cream	0.025%
Zostrix HP	cream	0.075%
Combination Product		
Pain Doctor	cream	0.025% capsaicin 25% methyl salicylate

Patients with arthritis who are taking systemic medication for analgesic and/or anti-inflammatory action should be advised to continue this therapy while initiating treatment with external analgesic products. Once they respond to the topical product, a physician may recommend that they decrease their dose of systemic analgesic therapy.

The vehicle is important to the action of external analgesic products. As fillers, extent of compression, and tablet coating are factors that affect tablet bioavailability, percentage and type of vehicle ingredients can influence biologic activity of topical products. The results seen in clinical trials with purified capsaicin in an appropriate vehicle may not necessarily occur with other so-called products claimed to be equivalent. Evidence of clinical safety and efficacy and a reputable manufacturer should strongly influence selection and recommendation of products.

Patients should use care in following directions for proper use of topical analgesics. Unlike counterirritants that provide temporary relief following one or two applications, capsaicin's activity is to reduce substance P levels. This may require continuous application over several days before analgesia will be attained. Topical capsaicin must be used without interruption for sustained pain relief. It must be applied three to four times a day for maximal benefit. Relief may be felt within a few days, but often it takes two or more weeks to experience maximum relief. Once patients have experienced relief, the number of daily applications can be reduced to once or twice a day, depending on pain control.

Pain intensity of arthritis often parallels the seriousness of the condition, but does not necessarily do so. It can be constant or intermittent. Patients should be advised to continue to see their physician for evaluation and/or supervision of arthritis treatment, even if their pain occurs only occasionally or is not severe. These agents mask pain, but they do not correct the underlying cause or progression of the disease.

As with all medicinal treatments, patients should be advised to expect that a particular analgesic may reduce their pain, but rarely will any treatment, topical or systemic, alleviate all pain associated with arthritis.

Continuing Education Quiz

Patient Counseling on Topical Analgesic Therapy for Arthritis Pain, Part 2: Capsaicin and Patient Advice

Please circle the correct answer. For information on how to submit this quiz for continuing education credit see the directions below.

1. Capsaicin is chemically related to:
a. eugenol.
b. eucalyptus.
c. peppermint.
d. thyme.

2. Because the site of action of capsaicin is on neurons that transmit pain impulses from the site of tissue injury to the brain, they therefore act on:
a. fast-conducting fibers.
b. type A fibers.
c. myelinated fibers.
d. nociceptive fibers.

3. Which of the following products is available commercially in both a 0.025 percent and 0.075 percent lotion?
a. Capzisin
b. R-Gel
c. Capsin
d. Zostrix

4. Capsaicin produces greater pharmacologic effects than capsicum oleoresin because the latter:
a. is too toxic for application to the skin.
b. contains substances believed to directly antagonize capsaicin.
c. contains extract of red pepper while capsaicin is derived from black pepper.
d. is a natural product while capsaicin is made synthetically.

5. Which of the following is part of the pharmacologic action of capsaicin?
a. It inhibits the initial pain response.
b. It renders the neuron insensitive to physico-chemical stimulation.
c. It increases axonal response to electrical stimulation.
d. It blocks the neuronal uptake of serotonin.

6. Capsaicin is available commercially in combination with which of the following ingredients?
a. Lidocaine
b. Menthol
c. Hydrocortisone
d. Methyl salicylate

7. The pharmacologic action of capsaicin is due to:
a. inhibition of prostaglandin synthesis.
b. blockade of opioid receptors.
c. depletion of substance P.
d. stimulation of vitamin D.

8. Applying capsaicin in a concentration greater than one percent will most likely result in:
a. exaggerated painful response to heat.
b. photosensitivity.
c. discoloration of the skin.
d. allergic reactions.

9. The best course of therapy for capsaicin is:
a. to apply it only when needed, but for no longer than three days.
b. to apply it without interruption.

10. The best advice to give a person taking an oral analgesic who requests information on capsaicin-containing products is:
a. continue taking the oral analgesic while initiating treatment with the topical analgesic.
b. discontinue the oral analgesic before using the topical analgesic.

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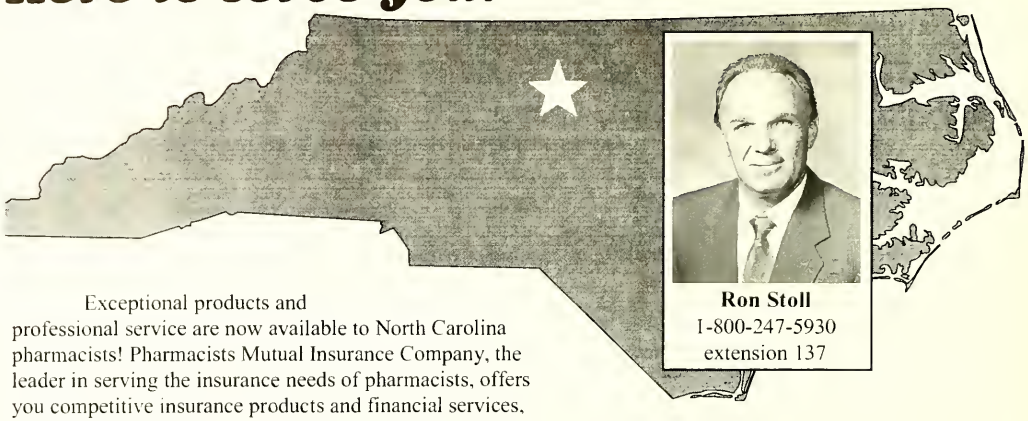

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Closing dates for classified advertising is the first day of the month preceding the month of issue. The rate for NCPhA members is .25¢ a word with a $5 minimum; the non-member rate is .50¢ a word with a $10 minimum. Blind ads are available upon request. Send ads to Carolina Journal of Pharmacy, c/o NCPhA, P.O. Box 229, Chapel Hill, NC 27514-0229 or fax to 919-968-9430.

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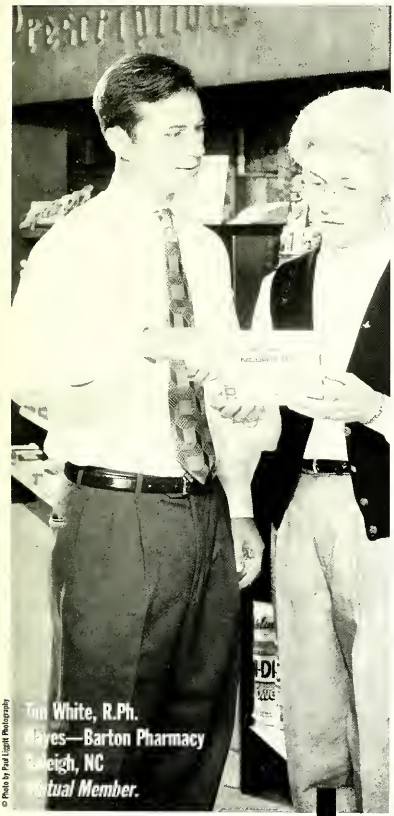

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Volume 77, Number 3 May/June 1997

Veterinary Advances

Pharmacist Gigi Davidson tends to patient Eva following her colic surgery.

Story on page 4.

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CONTENTS

ADVERTISERS

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Veterinary Pharmacy

A New Breed of Patients

by Jennifer Stamer, Managing Editor

Imagine practicing pharmacy in a setting devoid of third party billing, OBRA 1990 counseling requirements, or potential for any patient drug abuse. Sound ideal? Well, Pharmacist Gigi Davidson, Apex, North Carolina thinks so—however, not for the usual reasons. Gigi, director of pharmacy for the North Carolina State University College of Veterinary Medicine, has devoted her entire pharmacy career to caring for our state's animal population.

A native of Goldsboro, North Carolina, the Doctor Doolittle syndrome bit Gigi at a young age. She grew up longing to attend Alabama's Auburn University Veterinary School to one day become a veterinarian. At that time, North Carolina did not have a veterinary school. Somewhere along the way, Gigi strayed from her original plans and decided to attend the University of North Carolina at Chapel Hill. During one of her summers off from school, she worked along side a veterinarian and to her surprise, realized that veterinary medicine was not her perfect match. That same summer, Gigi also worked in a hospital pharmacy which later inspired her to apply and attend pharmacy school at the University of North Carolina that following year.

Time would reveal that Gigi still had a yearning to be close to animals. It was during her last year of pharmacy school in the early 1980's that she began investigating veterinary pharmacy, an opportunity not well established or recognized at the time. In fact, there were no opportunities for her to explore as she neared graduation. Nevertheless, Gigi was determined to tell as many people as possible about her unwavering interest in veterinary pharmacy, including her pharmacy school advisor, Fred Eckel. A few days before graduation, the UNC School of Pharmacy received a call from pharmacy director, Grace Penny, at the North Carolina State University in Raleigh. She expressed their desire to open a pharmacy in their brand new veterinary school of medicine and were searching for a pharmacist to assist in setting up the practice. Gigi has been there ever since.

Veterinary pharmacy practice is a facet of pharmacy frequently overlooked by most pharmacy students and graduates. Currently, no formal training exists for those pharmacists wanting to practice veterinary pharmacy. However, Gigi plans soon to begin working in conjunction with the Society of Veterinary Hospital Pharmacists and a diagnostic company to define standards for veterinary pharmacy. She is committed to developing a means of training for pharmacists so that they will be well equipped to practice veterinary pharmacy. For now, Gigi devotes a considerable portion of her time precepting the twelve to sixteen pharmacy students she gets every year.

Pharmacist Gigi Davidson checks her patient's chart during her morning rounds. This pony broke its two hind hocks (legs).

She takes great pride in precepting her students although she feels she can not possibly teach them enough information in one month's time.

Veterinary pharmacy can be overwhelming when there is not a defined avenue to become properly educated. In the meantime, Gigi recommends that those interested persons audit veterinary school classes, especially anatomy, physiology, pharmacology, and taxonomy. She encourages pharmacy students to associate with the people who best know the answers, veterinarians. Rounding with veterinarians and veterinary students is perhaps the best way to glean information, according to Gigi. She believes the learning curve without having any prior training in veterinary pharmacy is about five years. Gigi credits the veterinarians at the North Carolina Veterinary School of Medicine for enabling her to acquire the vast knowledge required to safely and effectively practice veterinary pharmacy.

On the positive side, there is some crossover between human pharmacy and animal pharmacy, but the differences are tremendous. Gigi did not have to abandon all of the information she learned in pharmacy school, although she admits there were some drug classes that she had to put in the back of her mind. Drug classes like cholesterol lowering agents, antihypertensives, birth control medications, and psychotropics are just not used in veterinary medicine. Furthermore, Gigi adds "There are a lot of the same drugs, just very different concentrations. You really have to be careful, you can't just walk up to a shelf and extrapolate doses." It takes a while to get accustomed to such varying doses— sometimes much greater, sometimes much smaller. Proper dosing is truly something learned on the job.

Gigi and her pharmacy interns Audra Williams (left) and Brookie Bumgardner (right), review their patient's TPN therapy to treat his lead poisoning. The sheep, named Q-Tips, ingested peeled paint from the side of his barn.

Drug applications can also be challenging in veterinary pharmacy. Some medications used in both humans and animals may be used in a completely different way to achieve different therapeutic outcomes. "Guafenasin, an oral expectorant in humans, is made into an IV form [in veterinary pharmacy] for horses to be used as a skeletal muscle relaxant prior to surgery," says Gigi.

Not only did Gigi have to learn different medications and their proper applications, but she also had to learn the numerous animal species. In human pharmacy, students have to master the pharmacology and kinetics involved in one species, the human being. Whereas in veterinary pharmacy, students are required to learn how drugs affect, and are affected, by the

QUIZ

Here's a quiz to see how much you know about veterinary pharmacology:

1. What is the active ingredient in chocolate that can make dogs so sick?
2. Why do they say that you shouldn't give your cat aspirin?
3. What do you give your dog when he's apprehensive about the furniture you just bought for the living room?
4. Why give dogs Prozac?
5. What drug is most commonly used to anesthetize large animals (e.g. elk, deer, bison, elephants, horses, etc.)?

answers on next page

many animal species. Gigi explains, "In terms of organ system disease and pharmacotherapy, humans and animals are exactly the same. There are extreme differences between the species though." Gigi elaborates stating that cats cannot metabolize certain drugs, dogs have very thin skin, and horses have a more complex and comprehensive gastrointestinal tract than humans do.

The differences between humans and animals do not end with the obvious physiological variances. There are also significant behavioral components that must be accounted for, and considered, when deciding on a certain pharmacotherapy plan. For example, "We don't groom ourselves the same way animals do. You really have to be careful with topical

Dr. Adam Birkenheuer examines Gigi's cat Elizabeth as he suspects a middle ear infection. Pictured left to right, Dr. Adam Birkenheuer, Gigi Davidson, and technician Janet Schuster.

therapy. Animals can lick a drug off which we consider to be therapeutic," Gigi says. Other behavioral characteristics including eating and sleeping habits must be noted when choosing a proper medication and its route.

Toxicologically speaking, animals generally are more sensitive to substances than are humans. There are many substances that are innocuous to humans that pose grave threats to animals. Chocolate and estrogen are two such substances that, when ingested by dogs, can be fatal. This type of information is among the "things I really want to get out there in the public," Gigi comments. It is imperative that animal owners take a high level of responsibility when caring for their animals. Unnecessary hospital visits can be prevented when simple tips from veterinarians and veterinary pharmacists are heeded by the animal owner.

Another serious consideration in practicing veterinary pharmacy is the issue of euthanasia, the medical decision to induce death. Euthanasia is a very real alternative in veterinary medicine. In North Carolina, animals are considered property—the property of their owners. Therefore, it is the decision of the animal owner to decide the outcome of their sick animal. This is perhaps the part of veterinary medicine which causes Gigi the most distress, especially when she feels a patient is unnecessarily euthanized. She remembers patients that could have been saved; however, the owner either did not have the resources to carry on with the needed medical care, or more disturbing, the owner elected not to invest any more money into the health care of his animal. "Animal cruelty and neglect are incredible frustrations. Sometimes I don't agree with owner decisions, but I have to stay out of it. That's very frustrating," says Gigi. Consequently, dispensing 390 mg/ml of pentobarbital, the standard unit dose death at the NC State University Veterinary School, conjures unpleasant thoughts in Gigi's mind despite occasions she feels it is warranted.

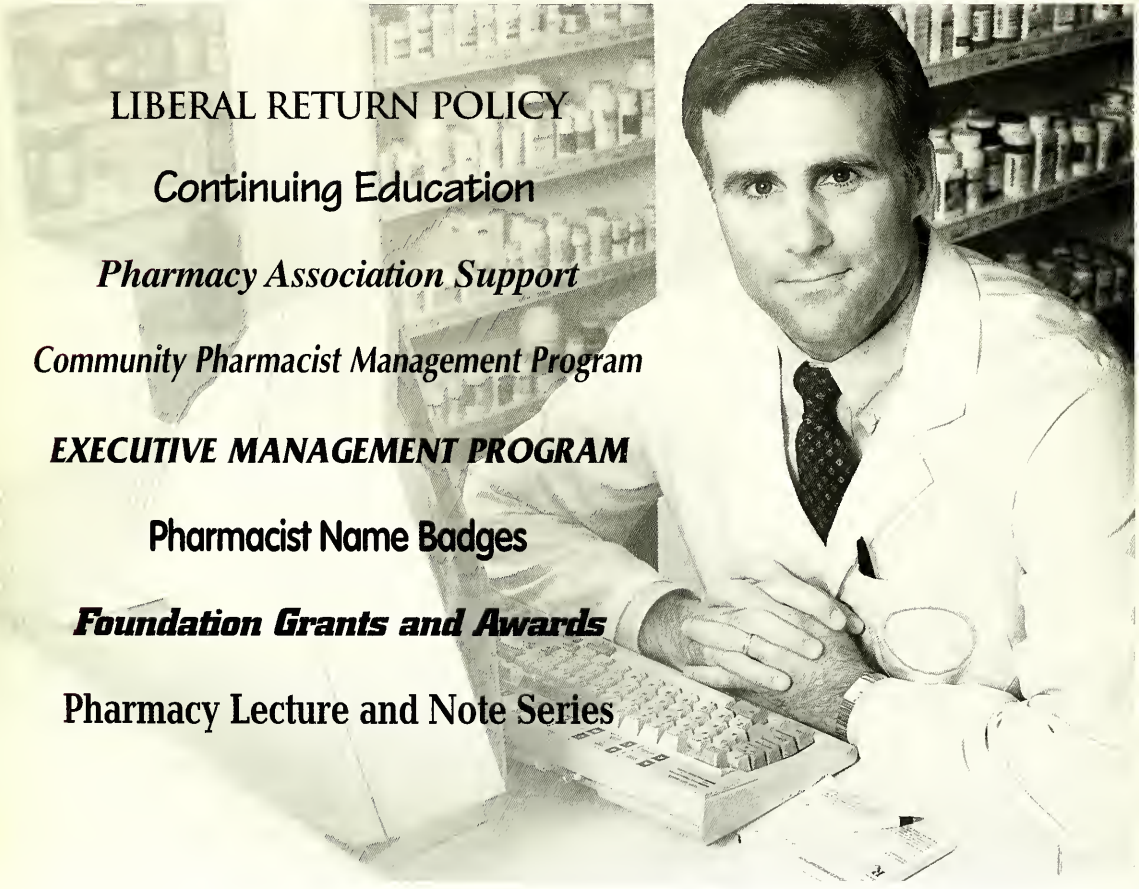
For the most part, veterinary medicine is extremely gratifying to Gigi. When asked what she likes most about her job, with a teeth baring smile she exclaims, "The patients, unquestionably! It's just great to see animals all day long." Gigi was not kidding when she said she sees animals all day. After work she is greeted by a house full of felines, Travis, Lucy, Meyer, and Elizabeth. Total compassion for animals is a lifestyle for Gigi—one she expects will never change.

Answers to Quiz on page 5

1. The active ingredient contained in chocolate is theobromine. With as little as .4 ounces, a dog can begin to show signs of toxicity.
2. That's just a myth. Aspirin may be given in small doses. However, acetaminophen should NEVER be given to a cat since cats lack the enzyme glucoronide transferase, so they can't metabolize the drug. Thus, a toxic metabolite accumulates in the liver, leading to death.
3. Give the dog BusPar™ (buspirone) for nine days until the problem is resolved. In humans, BusPar is prescribed for anti-anxiety.
4. Prozac can be prescribed to small animals for Obsessive Compulsive Disorders, such as incessant licking and/or scratching a body part for no apparent reason.
5. The most commonly used drug is Etorphine, which has 10,000 times the analgesic potency of morphine. One drop in the human eye can kill!

What pharmacists may think about SmithKline Beecham Pharmaceuticals

What pharmacists ought to know...



SmithKline Beecham
Pharmaceuticals

Independents are Going to the Dogs

Every independent pharmacist can recount a story or two about difficult patients who are unwilling to take their medicine. But how many pharmacists have to resort to mixing amoxicillin with Cheez Whiz and squirting it into the patient's mouth? Well, if that pharmacist deals with patients that have four legs and a tail, such stories are pretty common.

In recent years more independent pharmacists have turned to compounding as a complementary sideline to their retail practice or, in some instances, as their sole practice.

"There are two benefits to pet compounding," says Peter Fallon, owner of Fallon Pharmacy in Latham, New York, who compounds about two pet prescriptions a day. "There's the economic advantage, of course. But, there's also the fact the people really appreciate the effort you make for their pet. That gives me a feeling of tremendous satisfaction."

The greatest benefit is filling that specific need," adds Richard Rochefort, owner of Sullivan Drug Store in Lancaster, New Hampshire. "That dog or cat can't even speak up about a problem. I have to find the method that's the least traumatic for them."

One of the more interesting aspects of compounding pet medications is that human patients view their pets' medical needs in an entirely different light from their own.

"I'm always surprised that a patient will complain about a $50 prescription [for themselves], but will quickly spend twice that amount on their pet," notes Mike Collins, owner of Healthway Pharmacy in St. Charles, Michigan. Collins, whose practice is strictly compounding, says about 15 to 20 percent of his business is pet-related.

Most pharmacists began compounding drugs for vets after they have read or heard about other pharmacists using it as an integral part of their practice. However, they discovered that most vets were unaware that their community pharmacist could fill such an important need.

"I recognized there was a need for this service," says Robert Horwitz, owner of Doc's Pharmacy and Home Health Center in Walnut Creek, California. "I had patients come in with their prescriptions and ask if I could help with their cat or dog who had trouble taking its medicine." Since then, Horwitz has become a frequent speaker at his local veterinary association's monthly dinner meetings and recently spoke at the annual meeting of the American Animal Hospital Association. Compounding animal medications now accounts for about one-sixth of his practice.

Collins regularly speaks to area veterinary groups about his services and sends out a quarterly newsletter to vets to keep them informed on the latest products. But, while many pharmacists market their services to local veterinarians, Rochefort and Collins point out that much of their pet compounding work results from word-of-mouth advertising. "I have one lady who lives two hours away and brings her cat in for its medicine," Rochefort explains. "That's the power of word-of-mouth."

Salmon with Prednisone

Animals and humans often have variations of the same disease. Pets can develop skin rashes, heart conditions, eye infections, cancer, back trouble, or diabetes. However, pet medications present unique problems that require a pharmacist's compounding skills.

"It may be inconvenient to give a large tablet to a small dog or many small tablets to a cow," says Rocheford. "We can compound a dosage that is appropriate for any animal."

"When a client comes in with a prescription for a pet, I try to find out as much as possible about the pet," explains Rocheford. "If there are specific problems, I call the vet and discuss the situation, whether it's the dosage or the form. "I had a four-legged patient that required a 7 mg dosage of Neptazane," Rochefort continues. "The smallest dosage made, however, is a 25 mg tablet. So, I simply compounded the medication into a 7 mg cap-

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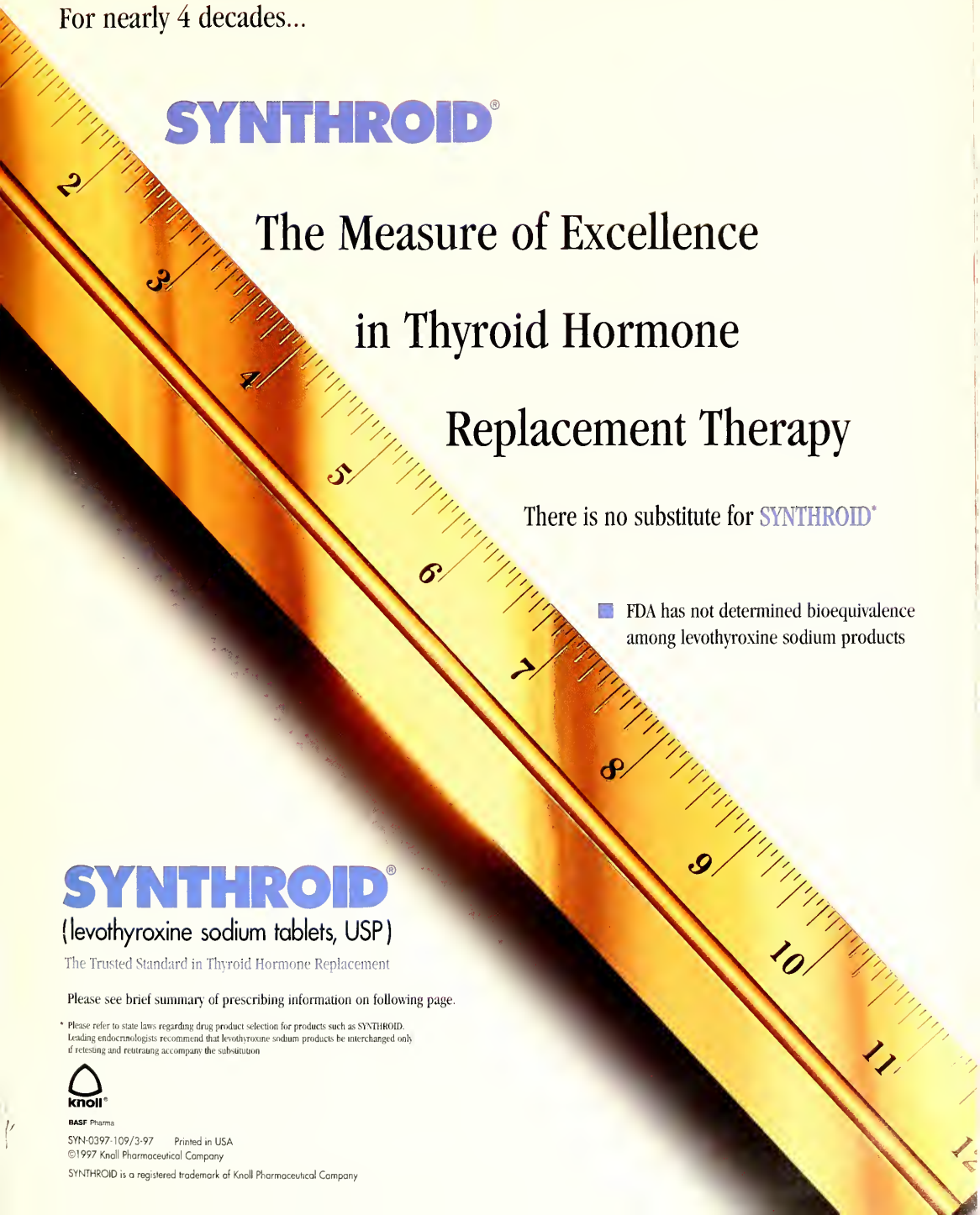

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CONTRAINDICATIONS SYNTHROID is contraindicated in patients with untreated thyrotoxicosis of any etiology or an apparent hypersensitivity to thyroid hormones or any of the inactive product constituents. (The 50 mcg tablet is formulated without color additives for patients who are sensitive to dyes.) There is no well-documented evidence of true allergic or idiosyncratic reactions to thyroid hormone. SYNTHROID is also contraindicated in patients with uncorrected adrenal insufficiency, as thyroid hormones increase tissue demands for adrenocortical hormones and may thereby precipitate acute adrenal crisis (see **PRECAUTIONS**).

WARNINGS Thyroid hormones, either alone or together with other therapeutic agents, should not be used for the treatment of obesity. In euthyroid patients, doses within the range of daily hormonal requirements are ineffective for weight reduction. Larger doses may produce serious or even life-threatening manifestations of toxicity, particularly when given in association with sympathomimetic amines such as those used for their anorectic effects.

The use of SYNTHROID in the treatment of obesity, either alone or in combination with other drugs, is unjustified. The use of SYNTHROID is also unjustified in the treatment of male or female infertility unless this condition is associated with hypothyroidism.

PRECAUTIONS General SYNTHROID should be used with caution in patients with cardiovascular disorders, including angina, coronary artery disease, and hypertension, and in the elderly who have a greater likelihood of occult cardiac disease. Concomitant administration of thyroid hormone and sympathomimetic agents to patients with coronary artery disease may increase the risk of coronary insufficiency.

Use of SYNTHROID in patients with concomitant diabetes mellitus, diabetes insipidus or adrenal cortical insufficiency may aggravate the intensity of their symptoms. Appropriate adjustments of the various therapeutic measures directed at these concomitant endocrine diseases may therefore be required. Treatment of myxedema coma may require simultaneous administration of glucocorticoids (see **DOSAGE AND ADMINISTRATION**).

T_3 enhances the response to anticoagulant therapy. Prothrombin time should be closely monitored in patients taking both SYNTHROID and oral anticoagulants, and the dosage of anticoagulant adjusted accordingly.

Seizures have been reported rarely in association with the initiation of levothyroxine sodium therapy, and may be related to the effect of thyroid hormone on seizure threshold.

Lithium blocks the TSH-mediated release of T_4 and T_3. Thyroid function should therefore be carefully monitored during lithium initiation, stabilization, and maintenance. If hypothyroidism occurs during lithium treatment, a higher than usual SYNTHROID dose may be required.

Laboratory Tests Treatment of patients with SYNTHROID requires periodic assessment of thyroid status by appropriate laboratory tests and clinical evaluation. Selection of appropriate tests for the diagnosis and management of thyroid disorders depends on patient variables such as presenting signs and symptoms, pregnancy, and concomitant medications. A combination of sensitive TSH assay and free T_4 estimate (free T_4 index, FT_4I) are recommended to confirm a diagnosis of thyroid disease. TSH alone or initially may be useful for thyroid disease screening and for monitoring therapy for primary hypothyroidism, as a linear inverse correlation exists between serum TSH and free T_4. Measurement of total serum T_4 and T_3 resin T_3 uptake, and free T_4 concentrations may also be useful. Antithyroid microsomal antibodies are an indicator of autoimmune thyroid disease. The combination of an increased TSH and positive microsomal antibodies in an euthyroid patient is a major risk factor for the future development of clinical hypothyroidism. An elevated serum TSH in the presence of a normal T_4 may indicate subclinical hypothyroidism. Intracellular resistance to thyroid hormone is quite rare, and is suggested by clinical signs and symptoms of hypothyroidism in the presence of high serum T_4 levels. Adequacy of SYNTHROID therapy for hypothyroidism of pituitary or hypothalamic origin should be assessed by measuring FT_4I, which should be maintained in the upper half of the normal range. Measurement of TSH is not a reliable indicator of response to therapy for this condition.

Drug Interactions The magnitude and relative clinical importance of the potential interactions between SYNTHROID and other drugs are likely to be patient-specific and may vary by such factors as age, gender, race, intercurrent illnesses, dose of either agent, additional concomitant medications, and timing of drug administration. Any agent that alters thyroid hormone synthesis, secretion, distribution, effect on target tissues, metabolism, or elimination may alter the optimal therapeutic dose of SYNTHROID.

Adrenocorticoids–Metabolic clearance of adrenocorticoids is decreased in hypothyroid patients and increased in hyperthyroid patients, and may therefore change with changing thyroid status.

Amiodarone–Amiodarone therapy alone can cause hypothyroidism or hyperthyroidism.

Anticoagulants (oral)–The hypoprothrombinemic effect of anticoagulants may be potentiated, apparently by increased catabolism of vitamin K-dependent clotting factors.

Antidiabetic agents (insulin, sulfonylureas)–Requirements for insulin or oral antidiabetic agents may be reduced in hypothyroid patients with diabetes mellitus, and may subsequently increase with the initiation of thyroid hormone replacement therapy.

β-adrenergic blocking agents–Actions of some beta-blocking agents may be impaired when hypothyroid patients become euthyroid.

Cytokines (interferon, interleukin)–Cytokines have been reported to induce both hyperthyroidism and hypothyroidism.

Digitalis glycosides–Therapeutic effects of digitalis glycosides may be reduced. Serum digitalis levels may be decreased in hyperthyroidism or when a hypothyroid patient becomes euthyroid.

Ketamine–Marked hypertension and tachycardia have been reported in association with concomitant administration of levothyroxine sodium and ketamine.

Maprotiline–Risk of cardiac arrhythmias may increase.

Sodium iodide ^{131}I and ^{99m}Tc sodium pertechnetate–Uptake of radiolabeled ions may be decreased.

Somatrem/somatropin—Excessive concurrent use of thyroid hormone may accelerate epiphyseal closure. Untreated hypothyroidism may interfere with the growth response to somatrem or somatropin.

Theophylline—Theophylline clearance may decrease in hypothyroid patients and return toward normal when a euthyroid state is achieved.

Tricyclic antidepressants—Concurrent use may increase the therapeutic and toxic effects of both drugs, possibly due to increased catecholamine sensitivity. Onset of action of tricyclics may be accelerated.

Sympathomimetic agents—Possible increased risk of coronary insufficiency in patients with coronary artery disease.

Laboratory Test Interactions A number of drugs or moieties are known to alter serum levels of TSH, T_4 and T_3 and may thereby influence the interpretation of laboratory tests of thyroid function (see **Drug Interactions**):

1. Changes in TBG concentration should be taken into consideration when interpreting T_4 and T_3 values. Drugs such as estrogens and estrogen-containing oral contraceptives increase TBG concentrations. TBG concentrations may also be increased during pregnancy and in infectious hepatitis. Decreases in TBG concentrations are observed in nephrosis, acromegaly, and after androgen or corticosteroid therapy. Familial hyper- or hypo-thyroxine-binding-globulinemias have been described. The incidence of TBG deficiency is approximately 1 in 9000. Certain drugs such as salicylates inhibit the protein-binding of T_4. In such cases, the unbound (free) hormone should be measured. Alternatively, an indirect measure of free thyroxine, such as the FT_4I may be used.

2. Medicinal or dietary iodine interferes with *in vivo* tests of radioiodine uptake, producing low uptakes which may not indicate a true decrease in hormone synthesis.

3. Persistent clinical and laboratory evidence of hypothyroidism despite an adequate replacement dose suggests either poor patient compliance, impaired absorption, drug interactions, or decreased potency of the preparation due to improper storage.

Carcinogenesis, Mutagenesis, and Impairment of Fertility: Although animal studies to determine the mutagenic or carcinogenic potential of thyroid hormones have not been performed, synthetic T_4 is identical to that produced by the human thyroid gland. A reported association between prolonged thyroid hormone therapy and breast cancer has not been confirmed and patients receiving levothyroxine sodium for established indications should not discontinue therapy.

Pregnancy: Pregnancy Category A. Studies in pregnant women have not shown that levothyroxine sodium increases the risk of fetal abnormalities if administered during pregnancy. If levothyroxine sodium is used during pregnancy, the possibility of fetal harm appears remote. Because studies cannot rule out the possibility of harm, levothyroxine sodium should be used during pregnancy only if clearly needed.

Thyroid hormones cross the placental barrier to some extent. T_4 levels in the cord blood of athyroid fetuses have been shown to be about one-third of maternal levels. Nevertheless, maternal-fetal transfer of T_4 may not prevent *in utero* hypothyroidism.

Hypothyroidism during pregnancy is associated with a higher rate of complications, including spontaneous abortion and preeclampsia, and has been reported to have an adverse effect on fetal and childhood development. On the basis of current knowledge, SYNTHROID should therefore not be discontinued during pregnancy, and hypothyroidism diagnosed during pregnancy should be treated. Studies have shown that during pregnancy T_4 concentrations may decrease and TSH concentrations may increase to values outside normal ranges. Postpartum values are similar to preconception values. Elevations in TSH may occur as early as 4 weeks gestation.

Pregnant women who are maintained on SYNTHROID should have their TSH measured periodically. An elevated TSH should be corrected by an increase in SYNTHROID dose. After pregnancy, the dose can be decreased to the optimal preconception dose.

Nursing Mothers: Minimal amounts of thyroid hormones are excreted in human milk. Thyroid hormones are not associated with serious adverse reactions and do not have known tumorigenic potential. While caution should be exercised when SYNTHROID is administered to a nursing woman, adequate replacement doses of levothyroxine sodium are generally needed to maintain normal lactation.

Pediatric Use The incidence of congenital hypothyroidism is relatively high (1 in 4,000). Routine determinations of serum T_4 and/or TSH are therefore strongly advised in neonates in view of the deleterious effects of thyroid deficiency on growth and development.

Treatment should be initiated immediately upon diagnosis and generally maintained for life. If, however, transient hypothyroidism is suspected, therapy may be interrupted for 30 days after the age of 3 years to reassess the condition. If T_4 is low and TSH is elevated after that time, permanent hypothyroidism is confirmed and therapy should be reinstituted. If the T_4 and TSH remain in the normal range, a preliminary diagnosis of transient hypothyroidism can be made. Nevertheless, continued close observation with periodic thyroid function testing is warranted.

ADVERSE REACTIONS Adverse reactions other than those indicative of thyrotoxicosis as a result of therapeutic overdosage, either initially or during the maintenance periods, are rare (see **OVERDOSAGE**). Craniosynostosis has been associated with iatrogenic hyperthyroidism in infants receiving thyroid hormone replacement therapy. Inadequate doses of SYNTHROID may produce or fail to resolve symptoms of hypothyroidism. Hypersensitivity reactions to the product excipients, such as rash and urticaria, may occur. Partial hair loss may occur during the initial months of therapy, but is generally transient. The incidence of continued hair loss is unknown. Pseudotumor cerebri has been reported in pediatric patients receiving thyroid hormone replacement therapy.

OVERDOSAGE: Signs and Symptoms: Excessive doses of SYNTHROID result in a hypermetabolic state indistinguishable from thyrotoxicosis of endogenous origin. Signs and symptoms of thyrotoxicosis include weight loss, increased appetite, palpitations, nervousness, diarrhea, abdominal cramps, sweating, tachycardia, increased pulse and blood pressure, cardiac arrhythmias, tremors, insomnia, heat intolerance, fever, and menstrual irregularities. Symptoms are not always evident or may not appear until several days after ingestion.

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sule." Other pharmacists have resorted to compounding medications into a wide assortment of forms: suspensions, medicated drinking water, or candy. However, a pharmacist can't mix a drug with just any flavoring agent a pet likes. "It's important to know if a drug is stable or soluble in oil or water," Horwitz points out. "That can make a difference in whether you use oil-packed or water-packed tuna."

The pet who refuses to take its medicine because of the taste often presents the biggest challenge to the pharmacist's compounding skills. "I have one lady whose cat doesn't like fish flavors," Rochefort says. "I decided to try a liver and a chicken flavor on my own cat. It didn't like the liver, so I tried the chicken and it worked."

Fallon says the most successful flavoring agents for cats are tuna oil or chicken from broth. Horwitz likes to mix medications such as prednisone with salmon for his feline patients.

While cats definitely live up to their finicky reputation, canine patients can be just as temperamental when it comes to taste. Besides resorting to Cheez Whiz, Rochefort has also had to mix dog medicine with peanut butter. Horwitz says a ferret was brought into the pharmacy one day for a taste test of medicine-masking flavoring. Since the animal showed a preference for sweets, Horwitz mixed the medicine in a chocolate suspension. "We know the favorite flavors of the different species of animals," says Horwitz. "Whether it's a canine, feline, marsupial, rodent, avian, or reptile, we will find a flavor the animal will take. We use fish, liver, beef, chicken, lobster, clam, tuna, peanut butter, or some 50 other flavors to please pets."

He should know. Horwitz also compounds medications for animals at the San Diego and San Francisco Zoos. His compounding efforts even helped save the life of an ailing polar bear at the San Diego Zoo. "That was an exciting and emotional experience for me," Horwitz says.

But while medicines for cats, dogs, or even ferrets, can simply be mixed with a tempting flavoring agent, it's not that simple when it comes to an animal such as a hippopotamus.

"Most of the medications for the larger animals are injectibles," Horwitz explains. The animal is first tranquilized and then the medicine is injected."

However, Fallon nominates birds as the most troublesome patient. "They present the biggest challenge," Fallon notes. "It's not easy getting the medicine into them."

Collins has also had his share of finicky fowl, including parakeets, which often develop a thyroid problem that causes them to gain weight, requiring a prescription for levothyroxine. "Parakeets like sweet things," Collins explains. "We add a simple syrup and some cherry or lemon flavoring to make the medicine more appealing to them. And since levothyroxine is water-soluble, it can be added to their drinking water or fed to them with an eye dropper."

Another common problem with pet prescriptions is that the medicine may no longer be manufactured. "Sometimes the government sets new standards of safety or efficacy which the manufacturer either can't meet or can't afford to do the research to prove the worth of their product," Horwitz says. "Sometimes a drug is made obsolete by newer and better drugs, only to find out that a few animals or species respond better to the old, discontinued drug."

In these cases, pharmacists can mix a medicine with other components, preparing a dosage that is often better than the discontinued

NC State Veterinary School Technician Janet Schuster feeds orphaned baby starling.

medicine and tailored to a particular pet.

Like their human counterparts, pets often require more than one medicine at a time. Ask any cat or dog owner how difficult it is to get their pet to swallow a single tablet, and then ask about the prospect of administering several tablets at a time. "Combining more than one drug into a dose makes administration easier and the animal happier," Horwitz says. "We can also make medications that last longer in the body so they don't have to be taken as often."

In other instances, a pet may have a skin problem that does not respond well to creams or ointments with only one ingredient, requiring the vet to prescribe several different medicines. This not only makes it expensive for the owner but very difficult to apply them all correctly.

"In our lab we can compound many medicines into a base that contains the required concentration of each," Rochefort explains.

For example, if the pet suffers from diabetes, the pharmacist can compound oral hypoglycemics in the exact dose necessary, dilute insulin to make it easier to administer, or make protamin zinc insulin.

Pharmacists agree that compounding pet medications has few disadvantages, and is a niche that others should consider.

"The important thing is to take the time and do a little research on the subject," Rochefort says.

There's one big bonus with this kind of practice. "I've yet to see a cat with a PBM card," Collins says.

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Pharmacy Practice in the 21st Century:

How Do We Get There?

by Pam Tyler, UNC Student, winning essay and recipient of the Ralph P. Rogers Scholarship Award

With the coming of the 21st century, there are many unanswered questions about where the profession of pharmacy is heading. What purpose will we serve as pharmacists is only one of many concerns facing pharmacists today. Many believe that pharmacy is going to have to go through "reprofessionalism" to redefine which of societies needs we will be fulfilling before we will find the answers to any of these questions. In the end we, as pharmacists, are the ones that need to be responsible for developing new pharmacy practice standards. To meet this goal, pharmacists should utilize available technology to provide effective pharmaceutical care.

Pharmaceutical care represents an exciting new vision for pharmacy. With the turn of the 20th century comes a whole new aspect of pharmacy and pharmaceutical care is at the top of this new vision.

Two of the major reasons given by pharmacists for not being able to effectively provide pharmaceutical care are a lack of time and a lack of necessary information. Technology has advanced such that these two problems no longer have to be barriers to providing quality patient care. By utilizing the available resources, pharmacists can take a large step in redefining their professional objectives.

One technology that is currently available but underutilized is automated dispensing of medications. This can be accomplished by several systems including robots, nurse unit administration, and cart fill automation. Automated dispensing is an efficient and reliable method of getting medications to patients, and these systems have excellent safety records. Additionally, the process of automation accomplishes the goal of freeing pharmacist time so that he or she may provide cognitive services.

A second technology that will help pharmacy to reach its goals is improved computer systems. Technology is available which would allow prescriptions to be electronically transferred from physicians' offices to pharmacies. Through imaging systems, a copy of the prescription can be sent to the pharmacy so that both a hard copy and an electronic copy would be available. This system would also save time for the pharmacist. The system could be set up to work with automation such that when the prescription arrives at the pharmacy the automation device immediately begins to dispense the medication while the pharmacist reviews the data. The addition of electronic mail to the computer system would allow more efficient communication between physicians and pharmacists. Messages could be coded in some ways as to urgency of response needed. This would offer pharmacists the opportunity to make suggestions about therapy, ask questions about prescriptions, and inform physicians about patients' progress.

A more team-oriented approach to providing care wold promote sharing of knowledge by both the pharmacists and physician. Along with the prescription, the physician could attach a copy of pertinent medical information about the patient. Therefore, the pharmacist would have access to the information needed to effectively counsel the patient and make recommendations for therapy. As more libraries and journals become available on-line, pharmacists will also be able to access primary literature to collect recent data or more detailed information.

During the past several years, physicians have revitalized the importance of primary care, and pharmacists have embraced the philosophy of pharmaceutical care. The Practice Standards of ASHP states that pharmaceutical care is the direct responsible provision of medication-related care for the purpose of achieving definite outcomes that improve a patient's quality of life.

Pharmaceutical care can be thought of as both a purpose for pharmacy practice and a

purpose of medication use processes. A professional reason that pharmacists engage in pharmacy practice should be to deliver pharmaceutical care. This can be achieved when pharmaceutical care is a part of the pharmacy department's central mission and the patient outcome is the number one priority. With advancement in technology today, this can limit the time consuming activities of pharmacists behind the counter and give them more time to concentrate on delivering this care. Such care may include counseling of the medication for adverse effects, key tips, and correct administration of the medication. Blood pressure monitoring and blood-glucose monitoring are also a new trend in care.

There are five principle elements that encompass pharmaceutical care: medication-related, care, outcomes, quality of life, and responsibility. Pharmaceutical care not only involves the actual medication therapy, but whether or not certain medications are appropriate in different situations. This may include decisions about medication selection, dosages, routes and methods of administration, and therapy monitoring.

The concept of caring for the well-being of another person is highly emphasized in the practice of pharmaceutical care. The care of a patient in a pharmaceutical setting involves the unique knowledge and skills of the pharmacist to ensure optimal outcomes from the use of medication. Taking the concern for the patient, a pharmacist makes a direct, personal, caring commitment to the individual patient and acts in the patient's best interest. The pharmacist interacts with other professionals in designing and implementing a therapeutic plan to improve the patient's quality of life.

To improve the patient's quality of life, a medication-related therapeutic outcome is desired. Such outcomes include the care of a patient's disease, slowing of a disease process, elimination or reduction of a patient's symptoms or prevention of a disease. Lastly, a pharmacist has a responsibility to the patient. In other words, the patient's safety and well-being are entrusted to the pharmacists who as a professional is accountable for the patient outcomes or quality of care.

Pharmaceutical care represents an exciting new vision for pharmacy. With the turn of the 20th century comes a whole new aspect of pharmacy and pharmaceutical care is at the top of this new vision.

Whether we support it or not, pharmacy practice is going to change from the way we know it today. This change could prove to be positive or negative depending on how the people involved in ths profession answer the challenge that faces them. It is clear that implementing pharmaceutical care and technology into pharmacy practice would prove beneficial to our profession for the reasons stated previously. However, unless these two ideas are fully embraced by every pharmacist, our profession's future could prove to be very dim. Regardless of whether we are just entering this profession or whether we have been active participants for forty years, we all have an obligation to help our profession advance into the 21st century. We can do this by focusing on the future and not the past, and by starting to bring the ideas of pharmaceutical care and technology into our practices. Resistance or hesitation in response to this change could prove to be fatal, because if pharmacy does not fulfill societies' new needs, another profession will. As a result, pharmacy would no longer be needed. It is clear that the future of our profession lies within all our hands. If we all work together, the future of pharmacy can be promising and full of possibilities.

Mark Your Calendar

1997 National Pharmacy Week October 19–25

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Blind Spot on Pediacide

Our society is bipolar when it comes to drugs. We expect miracles from drugs to manage mental illness, cure some forms of cancer and make organ transplants possible. At the same time we condemn illicit drug use and federal authorities are ascending to apoplexy over referenda in Arizona and California which loosened controls on marijuana and other drugs. Each is understandable in its own context; it's natural to seek miracle cures and drug abusers, at least at the beginning of their journey, consciously choose their own course which is abhorred by so many in our population.

Yet we seem to have a blind spot on tragedies inflicted on innocent people outside our borders caused by contaminated pharmaceuticals. Last year at least 89 children died in Haiti from acetaminophen (paracetamol) syrup adulterated with diethylene glycol (DEG). Acetaminophen is the generic name for the active ingredient in Tylenol and it is virtually the only treatment for pain or fever in children. This is just the latest in a series of pediatric ward catastrophes. In 1990 a Nigerian hospital reported that 47 children died at their facility from the same DEG tainted acetaminophen product. More than 200 children died under similar circumstances from DEG in Bangladesh in 1992. All these cases involved pharmaceuticals in international commerce and there is no record of any criminal prosecutions from this pediacide.

The scope of the Haiti tragedy can be appreciated by projecting it to the population of the United States. If that had occurred here, more than 3,700 children would have died and the media uproar would certainly have produced prosecutions.

This contamination problem is well known in the pharmaceutical trade and is due to substandard glycerin, a commonly used sweetener. The first record of this as a problem was in 1937 when the Buffalo (NY) Pharmacal Company manufactured Elixir Sulfanilamide adulterated with DEG that caused over 100 deaths. DEG is the main component in antifreeze used to protect car engines and is highly toxic to humans. It was the first event of its kind and propelled the enactment of the Food, Drug and Cosmetic Act of 1938 which is the foundation for most current activities of Food and Drug Administration (FDA). We owe our safe drug system to the practices applied by FDA and the standards established independently by the United States Pharmacopeia.

It's an international scandal that, over 50 years later, dealers in these poisonous pharmaceuticals elude justice. These dealers can expect a reserved seat in hell but we need a secular way to deter others from such conduct in the future.

Safe drugs are, or ought to be, a basic human right. This is not a new concept when a Roman Court during the reign of Caesar declared that the safety of the people shall be the highest law.

One way to address this problem is a United Nations convention to reach across national borders. It should provide a system of practices and standards for pharmaceutical manufacturers and ingredient suppliers in international commerce. Events producing death or serious permanent injury could be investigated by World Health Organization staff for potential criminal prosecution in the International Court of Justice in The Hague. This would put those in this business on notice that future malfeasance could cost them dearly. Lives would be saved and it would work to preserve the basic standard of safe pharmaceuticals for everyone in the world including those most vulnerable.

The Board of Pharmacy column, a standing feature of the Carolina Journal of Pharmacy, is authored by David R. Work, Executive Director of the NC Board of Pharmacy.

Questions/Suggestions

Do you have an issue or topic you wish to see addressed in the Board of Pharmacy column? If so, send your request to the *Carolina Journal of Pharmacy*, P.O. Box 229, Chapel Hill, NC 27514.

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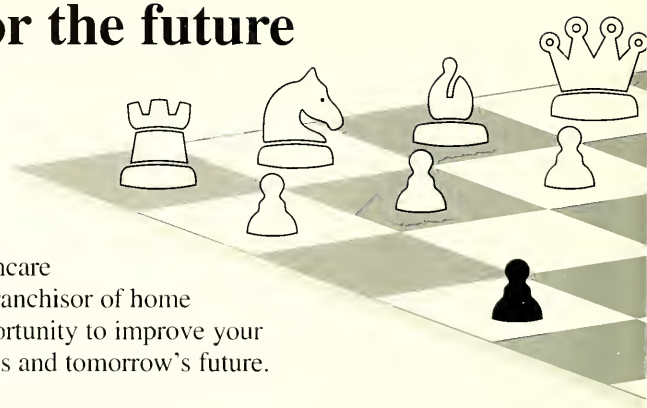

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Student Awards

The American Pharmaceutical Association (APhA) announced that Joanna Labrecque, a pharmacy student at Campbell University in North Carolina, was selected as the winner of the 1997 National Patient Counseling Competition at APhA's 144th Annual Meeting and Exposition in Los Angeles, California. Labrecque received a $600 cash award and a leather-bound collector's edition of the U.S. Pharmacopeia and National Formulary and an all expense paid trip to the 1997 National Council on Patient Information and Education meeting.

(Left to right) Dr. Richard D'Elia, Mary Herring (a candidate for APhA-ASP Speaker of the House), Joanna Labrecque (national winner), and Dr. Ronald Maddox, Dean of the CU Pharmacy School.

Amy Phillips, UNC School of Pharmacy third year student, was the recipient of a presitigous award at the recent APhA Annual Meeting. She was one of three pharmacy students to receive the Rhone-Poulenc Rorer Pharmaceuticals "Outstanding Essays in Pharmacy" award at the meeting. Three students each received $4,000 cash awards for the best essay submitted on how to further industry and professional relations. Amy was honored at a dinner Sunday evening on March 9, 1997 keynoted by Dr. D.C. Huffman, Jr. who spoke on "Developing a Successful Professional Practice in the 21st Century."

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FDA Does Not Approve Generic Forms of Estrogen-Replacement Therapy

The FDA's Center for Drug Evaluation and Research (CDER) announced May 5, 1997 that it will not approve synthetic generic forms of the estrogen-replacement drug Premarin™. This is because these generic products have not been shown to contain the same active ingredients, and therefore to work the same, as the original drug in treating women with menopausal symptoms and preventing osteoporosis.

Recent JAMA Publication Receives Much Attention

In the April 16, 1997 publication of *The Journal of American Medical Association* (JAMA) researchers claim that generic versions of the hypothyroid medication, levothyroxine sodium, are bioequivalent according to current FDA criteria. According to the study, such "products are not entirely identical and might be not be entirely interchangeable in all patients receiving replacement therapy." Therefore, patients taking hypothyroid medication are recommended to stay on their current therapy unless problems arise.

On the other hand, the manufacturer of the brand name drug, Synthroid™, believes that the data collected in this study are inconclusive and contains "major flaws in design and execution," according to a Knoll affiliate. The company purports that TSH levels were omitted from the study design which is the "single most valuable test in determining thyroid function."

Cholestech L•D•X System Provides Cholesterol Screening at Walmart Stores

Cholestech Corporation signed a two-year, minimum $2 million agreement with Health Management Systems Corporation of Richardson, TX to offer consumers testing of individual cholesterol levels using the Cholestech L•D•X System at selected Wal-Mart stores across the country.

The Cholestech L•D•X System is a telephone-sized diagnostic device which employs a single-use-state-of-the-art disposable cassette to perform multiple tests from a single drop of whole blood. The system has been shown to provide results—in less than five minutes— that are as accurate as similar tests performed in clinical and hospital labs. It is currently the only point-of-care multi-analyte system that is waived under the Clinical Laboratory Improvement Amendments (CLIA) of 1988, meaning that it can be operated reliably by anyone without requiring specific medical training.

Cancer Information Reaches the Internet

Cancer Information Network began on the Internet this spring offering health professionals unlimited access to continually updated clinical information. CIN is a professional only website and offers instant access to several clinical resources and tools. For more information about CIN, visit the website at www.cancernetwork.com or call Jack Gentile or Fay Symons at (516) 424-8900, ext. 301 or ext. 353, respectively.

FDA Proposed New, Easy to Understand Labeling for OTC Drugs

The FDA proposed new, greatly improved labels for drugs on which Americans depend for the vast majority of their day-to-day health care needs. The new labeling of over-the-counter (OTC) drugs, for which consumers spend $18 billion a year, will provide consumers with easier-to-read and understand information about the products—benefits and risks, and how they should be used.

The main provision of the proposed regulation involves the new label format. Its main features include: 1) uniform, standardized headings, subheadings and a standardized order of information 2) simplified language for certain words or phrases, for example: "throw away" instead of "discard"; "lung" instead of "pulmonary"; "hole in" instead of "perforation of" 3) a new bulleted, easier-to-read format, including a minimum type size and type style.

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Billboard Survey

1. Did you see the "*? About You Medication—Talk to Your Pharmacist*" billboards sponsored by NCSHP and NCPhA which were posted throughout the state in April 1997? Circle response: Yes No

If you did see one of the billboards, please continue. If you did not see any of the billboards, please return your survey response.

2. Rank the quality of the billboard (1 representing poor –5 representing excellent .)
Circle response: 1 2 3 4 5

3. Did you receive any comments from members of the general public regarding the billboards? Please circle either 0 or range of comments. 0 1-3 4-6 7-9 10>

4. The billboards were cosponsored by NCSHP and NCPhA. Should we continue to explore joint publications relations campaigns with various pharmacy organizations? Circle response.
Yes No

5. How do you evaluate billboards as a method of communication to the public? (1 representing poor – 5 representing excellent). Circle response: 1 2 3 4 5

6. Please relay any comments regarding the billboard campaign and/or future public communications and public relations campaigns.

Please return this survey by July 31, 1997 to NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

Patient Counseling: Homeopathy, Part 1: Introduction

Thomas A. Gossel, R.Ph., Ph.D.
Dean, and Professor of
Pharmacology and Toxicology
Ohio Northern University
Ada, Ohio

and

J. Richard Wuest,
R.Ph.,Pharm.D.
Professor of Pharmacy Practice
University of Cincinnati
Cincinnati, Ohio

Goals. The goals of this two-part series are to review the concepts of homeopathic medicine and comment on how they differ from allopathic (conventional) medical practices; explain the origins of homeopathy and comment on reasons for its resurgence; and discuss the preparation of homeopathic dosage forms.

Objectives. At the conclusion of this series, participants should be able to:

1. differentiate between the concepts of homeopathic and allopathic medicine;

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2. recognize the definition of terms used in homeopathy;
3. exhibit an understanding of the principles of homeopathic medicine; and
4. demonstrate knowledge on homeopathic dosage forms and their preparation.

Few topics capture the attention of pharmacists and the public to the extent of homeopathic medicine. This form of natural medicine, along with herbal remedies, has made a resurgence since its demise in the early and mid-1900s. Several studies have been conducted to assess the public's attitude toward conventional physician-directed health care. One showed that more than 90 percent of Americans try an OTC product or a home remedy before contacting a physician about their complaints. Another study reported that one third of Americans had sought some type of alternative care rather than making an appointment with a physician for diagnosis and treatment.

The information available on natural medicine has exploded over the last few years, not only in the nutrition-oriented press, but also in magazines popular with the lay public, computer information networks, and even professional pharmacy journals.

Today, individuals are seeking safe and effective ways to alleviate symptomatic complaints with minimal side effects. They are becoming more interested in not being sick in the first place, rather than the traditional "treat the illness after it occurs" philosophy of medicine in this country. Americans are concerned about pollution and the environment, and the holistic (mind/body/spirit) approach to good health. They are more aware of the adverse effects of drugs, and the morbid and deadly events sometimes associated with hospitals.

A major differentiating philosophy between homeopathy and traditional (allopathic) medicine is contained in their names. The term homeopathy, first expressed by German physician Samuel Hahnemann in 1807, was derived from the Greek works homiosis, meaning "similar" or "like," and Pathios, meaning "suffering." The name was meant to demonstrate its guiding principle, "like cures like," which Hahnemann describes as the Law of Similars. This concept is based in the belief that, if a substance causes an adverse effect, diluting that substance to an infinitesimal concentration can reduce or cure the symptoms of the patient.

Hahnemann, who is considered to be the Father of Homeopathic Medicine, is also credited with coining the term allopathy from the Greek stem all meaning "other" for its prefix. In his day, the "other" traditional medicine consisted of bleeding and the application of leeches, enemas and emetic "purging," and the administration of poisons such as lead and mercury. Therefore, Hahnemann's approach fostered a more humane, less harmful, and more disease-oriented treatment than the traditional methods, which often debilitated the patient to such an extent that it was difficult to survive the treatment.

The Law of Similars, as expressed by Hahnemann, states that by looking at the symptoms of a disease and matching them to the toxic effect of natural substances, one can improve

Table 1
Glossary of Terms

ALLERODES: Dilutions of antigens which induce antibody formation.

ATTENUATION: Diluting homeopathic substances to the point they are curative rather than toxic.

BIOENERGY: The intrinsic healing power of the body. An essential concept in holistic medicine.

HOLISTIC THERAPY: Therapy that takes into account the patient's whole person (body, mind and spirit), and attempts to restore the balance or equilibrium of bioenergetic forces to restore health.

HOMEOPATHY: The concept of treating the characteristic symptoms of a disease with diluted concentrations of a substance that causes those characteristic symptoms. Derived from the Greek words homiosis (similar) and pathios (suffering).

ISODES: Dilutions of botanical, chemical or zoological substances.

POTENTIZATION: Diluting a homeopathic substance to cause it to gain in its remedial properties.

PROVINGS: Dosing a human with a homeopathic substance until the entire range of its characteristic symptoms are determined.

SUCCUSSION: Shaking a diluted solution of a homeopathic substance vigorously to increase its energy and remedial properties.

TAUTOPATHY: Using dilutions of a homeopathic substance to counteract the toxicity of the same substance.

TRITURATION: Vigorously mixing insoluble forms of a homeopathic substance, either by hand or machine, to increase its energy and remedial properties.

or cure the disease by administering extremely dilute doses of the natural substance. A leading example of this concept is ipecac. A therapeutic dose of syrup of ipecac, as is used in treating poisoning in the 15 to 30ml range, will induce vomiting in healthy subjects. However, a tremendously dilute "homeopathic" dose of ipecac can, proponents claim, relieve nausea and vomiting caused by disease, drugs, or foods. The Law of Similars can be summarized as:

- every substance that causes a pharmacologic effect on healthy humans produces characteristic symptoms;
- every disease causes characteristic symptoms; and
- every disease can be treated by administering a small homeopathic dose of a substance that causes those same symptoms.

Since the inception of this concept, the symptoms caused by over 2,000 substances have been catalogued along with the illness for which they can be used. Homeopathic medicine, therefore, became the first attempt at a rational scientific basis of therapy involving an examination of a patient's symptoms and how they relate to disease, a knowledge of the action of the medication used in treatment, and a determination of the correct dose to use. The principles that describe homeopathy seem obvious when applied to today's medicine. Dr. Hahnemann had made a major leap forward toward what we currently know as homeopathy.

Today there still remains a major difference between homeopathic and traditional medicine, but it comes from the other end of the continuum. Homeopathic supporters claim that homeopathic medicines stimulate the body's own forces to cure illness without inducing the side effects of drug therapy. Modern traditional medicine, on the other hand, is based on the administration of antibiotics and other antimicrobials to kill invading organisms; replacement of insufficient or inhibition of excessive hormones, enzymes, and neurotransmitters; and interference with the body's normal processes (i.e., calcium channel blockers, ACE inhibitors) in order to alleviate disease symptoms.

Another extremely important component of homeopathic medicine claimed by proponents is the involvement of the entire patient by including proper diet, exercise, and sleep as important components of the treatment plan. Patients are urged to eat well and avoid excessive behaviors that agitate or depress them. They should also increase activities that make them happy. Part of the training of homeopathic practitioners involves assisting them in developing a caring, empathetic, and tolerant attitude toward their patients.

Table 1 lists a glossary of terms that will be mentioned throughout this lesson series.

As stated earlier, the originator of the concept of homeopathic medicine was Samuel Hahnemann, a physician living in Leipzig, Germany, at the turn of the nineteenth century. Economically, things were not as lucrative for physicians then, compared to today. In order to support his wife and seven children, Dr. Hahnemann, who was fluent in several languages, made a living by translating foreign texts into German.

One of the books, *A Trecis on Materia Medica* by respected Scottish physician and teacher Dr. William Cullen, interested him greatly; most specifically, Cullen's review of Peruvian bark. In those days it was believed that the active component of the Quina Quina tree was cinchona. Today we know it as quinine, the alkaloid contained therein. Then, as now, it was used to treat malaria.

Notes written during his translation of the book showed that Hahnemann became extremely interested in cinchona to the point that he began experimenting on himself by taking it twice a day. He noted that, after taking a dose, he became cold, then drowsy, then languid. This advanced to palpitations of his heart, quickening pulse, intolerable anxiety and trembling, pulsating headaches, pulsing in his face, thirst and intermit-

ert antibacterial activity. In rela- short order sulfanilamide, am- mines, barbiturates, and penicil- ere discovered. The country and l were mesmerized by these "in- cures," and lured by the market- orces of the international drug panies. Physicians were persuaded ift from the natural and compas- te, yet unspectacular approach to ng seen with homeopathy, to the dynamic, modern wonder drugs e era.

y the time World War II began, athic medicine had the support of national drug companies which millions of dollars in research. , this became worthwhile because was an economically beneficial me—a patent for the drug. With opathic medicine, there was no financial incentive.

early all homeopathic medicines een "proved" on a small scale by iduals dedicated to their belief o the advancement of the knowl- thereof. Rather than a few large ical drug firms, homeopathy re- n large numbers of small homeo- c dispensaries.

ore recently there has been a re- nce of homeopathic practice. The ber of pharmacies stocking at least homeopathic remedies is now in ens of thousands. In *FDA Con-* , it is stated that the homeopathic industry was developing at what gency called an alarming rate. Due concern in 1988, FDA issued a liance policy entitled, "Condi- Under Which Homeopathic icts May Be Marketed."

erein lies one of the major mis- standings of homeopathic medi- Opponents claim they are un- ated, unapproved, and potentially rous. Proponents claim that the opathic drug industry is gov- by the same regulations and atory groups as the rest of the ndustry. They point out that they comply with the provisions of the including the CGMP (Compre- ve Good Manufacturing Prac- , Tamper Evident Packaging, Listing Act, and the FDA Com-

Table 2
Opinions Presented to Explain the Resurgence of Homeopathic Medicine

- The public is more health conscience and wants to be more involved in staying well rather than waiting for disease to appear and then treating its symptoms.
- The "green movement" toward natural, organic foods with no preservatives or other additives - rejection of synthetic and processed foods.
- The public is more aware of environmental pollution and some actually consider drugs to be part of the pollution.
- The increased cost of prescription drugs when compared to homeopathic remedies.
- The growing animal rights movement that criticizes the use of animals in drug testing of allopathic medicines.
- Homeopathic remedies are becoming available to a greater extent.
- Patient discontent with the way health care is developing with the loss of choice for the physician they see, the hospital they can go to and the pharmacist they can deal with.
- The precept that current health care is mechanistic, preoccupied with authority, disregarding of the total patient and his/her feeling or emotions. Physicians are more willing to treat patients based on the results of laboratory tests and information from instruments rather than relying on understanding patients or their needs.
- The potential for serious side effects caused by drugs, some of which have led to morbidity, death and their removal from the market.
- The promise of instant cure for all diseases has not been fulfilled.
- The potential for addiction to psychoactive drugs.

pliance Policy Guidelines. Homeopathic firms must register with FDA, and their product must comply with FDA requirements. While homeo-

pathic drugs are not required to have an NDC number at this time, their products must be listed with the FDA.

Historically, homeopathic medicines were exempted from USP standards. This relates back to 1938 when FDA was granted far more extensive powers to regulate the food, drug, and cosmetic industries. Congress recognized two different reference standards for drugs: the United States Pharmacopoeia for allopathic drugs and the U.S. Homeopathic Pharmacopoeia for homeopathic medicines. In response to meeting with FDA, the USHP convention issued the first volume of its Homeopathic Pharmacopoeia Revision Service (HPRS) in 1988.

Since 1938, and more recently through the revision service, substances with monographs in the HPRS are recognized as official drugs in the Food, Drug, and Cosmetic Act and Code of Regulations. The HPRS updates manufacturing methods, provides guidelines for whether the homeopathic drug requires a prescription or can be purchased OTC, and publishes current monographs on all official homeopathic drug products.

The major difference between homeopathic and allopathic drugs is the result of research (double-blind efficacy studies) needed for the entry of the latter onto the American market. The new drug application process required of allopathic drugs must prove, to the satisfaction of FDA, that these drugs are safe and effective for their labeled claims. Homeopathic drugs do not undergo such rigorous testing. They cannot be patented and, therefore, there is no economic gain to be realized for investing the hundreds of millions of dollars required for research and development of allopathic drugs.

Proponents of homeopathic drugs claim that their effectiveness has been "proved" and that they are effective for their intended uses. Opponents scoff at this and are categorized into three groups. The first group, mainly individuals without a scientific background, is interested in giving them a try. The second group, persons trained in science, are somewhat hesitant because they are accustomed to scientific research leading to a safe and effective association with allopathic drugs. The third group, of course, includes those who say "Uh, what are you talking about?"

It is worth noting that there has been an upswing in interest in homeopathic medicine, both with lay persons as well as those in pharmacy and medical communities. More advertising is appearing in the lay press and professional journals. FDA recently changed the classification of homeopathic medicines from "fraud and quackery" to "alternative" medicine. Of major importance is a growing feeling that maybe there should not be an "us versus them" attitude between homeopathy and allopathy.

Opinions have been expressed that possibly homeopathic medicine is an integral part of the entire make-up of modern medical practice, and that it should be considered complimentary to allopathy, rather than a totally alternative form of therapy. Factors that are claimed to contribute to the resurgence of homeopathic medicine are listed in Table 2.

Part 2 of this series will discuss the principles of homeopathy, preparation of remedies, and sources and dosage forms of homeopathic remedies.

Continuing Education Quiz

Patient Counseling: Homeopathy, Part 1: Introduction

Please circle the correct answer. For information on how to submit this quiz for continuing education credit see the directions below.

1. The physician who first expressed the term homeopathy in the 1800's was:
   a. Charles Darwin.
   b. Samuel Hahnemann.
   c. William S. Merrell.
   d. Louis Pasteur.

2. All of the following concepts refer to homeopathy EXCEPT:
   a. Law of Similars.
   b. like cures like.
   c. similar suffering.
   d. use of enemas and emetics.

3. The Law of Similars is expressed in each of the following ways EXCEPT:
   a. every substance that causes a pharmacologic effect on healthy humans produces characteristic symptoms.
   b. every disease causes characteristic symptoms.
   c. every plant that looks like a human organ is useful in treating disease of that organ.
   d. every disease can be treated by administering a small homeopathic dose of a substance that causes those same symptoms.

4. Homeopathic dilutions of antigens which induce antibody formation are called:
   a. allerodes. c. hominodes.
   b. cathodes. d. isodes.

5. Dilutions of botanical, chemical and zoological substances are called:
   a. allerodes. c. hominodes.
   b. cathodes. d. isodes.

6. The process of diluting homeopathic substances to the point they are curative rather than toxic is:
   a. attenuation. c. succussion.
   b. potentization. d. trituration.

7. The process of shaking a diluted solution of a homeopathic substance vigorously to increase its energy and remedial properties is called:
   a. attenuation. c. succussion.
   b. potentization. d. trituration.

8. The process of vigorously mixing insoluble forms of the homeopathic substance to increase its energy and remedial properties is:
   a. attenuation. c. succussion.
   b. potentization. d. trituration.

9. The discovery of all of the following are claimed to have contributed to the decline of homeopathy EXCEPT:
   a. nitrous oxide for general anesthesia.
   b. salvarsan for treating syphilis.
   c. antiseptics for treating wounds.
   d. cinchona for treating malaria.

10. Homeopathic medicines must meet all the following requirements EXCEPT:
   a. the Comprehensive Good Manufacturing Practices.
   b. the package must have an NDC number.
   c. Tamper Evident Packaging.
   d. Drug Listing Act.

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CONTENTS

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President's Remarks

Jimmy S. Jackson
1997-98 NCPhA President

The Executive Committee has selected three topics to be the focus of our attention during the Association's year. The purpose of this writing is to share some ideas with you on one of these topics, "workload."

Since much of my career in pharmacy has been spent in administration, I have tried to become a good observer and a good listener.

When I visit a retail pharmacy today, what I observe are pharmacists spending most of their time not dispensing medication or counseling, but rather, entering data into a computer terminal or calling someone to correct data or to find out what data to enter. Most of the data entry which is required by the various third parties is on the card which the third party issued its member. A logical assumption is that if they issued the card, they must already have the information. The extensive amount of keyboarding involved in the data entry is very time consuming and is highly prone to errors.

We must move rapidly to the use of standardized, electronically readable, prescription drug cards.

In fact, my good friend with the National Association of Chain Drug Stores (NACDS), Robert Shapiro, pointed out to me that we have actually regressed. He explained that when third party cards first came out they had raised letters so that the pharmacist could run the card and a universal claim form through an imprinter machine like the ones used for Master Card and Visa. This was done to prevent the pharmacist from inadvertently getting the multiple numbers out of sequence or, possibly omitting numbers. Now the data has to be typed. Most plans require the submission of the patient's social security number, as well as, a group number, a plan number, a relationship code and a date of birth. If any of these submissions are incorrect, the prescription being submitted is rejected and the pharmacist must go through the "drill" again to try and correct any mistakes. In the event the pharmacist can not determine what is wrong, then a call must be made to the help desk. This is a time consuming process involving electronic answering devices etc. Following successful contact with a human, the pharmacist is told what information must be submited for the claim to be adjudicated. (I have been told many times that the date of birth is one of the most common causes for rejection.)

In the scenario I just presented, it is important to note that when the pharmacist calls the third party, they can advise him of the proper information to submit so that the claim can be processed, in other words they already had the correct information.

Today we live in a world dominated by the use of technology. A world with automatic teller machines located almost on every corner, including airports, large department stores, grocery stores, gas stations and even in some drug stores.

When we purchase gas at the local service station, we no longer have to go into the station to charge the gas to our credit card; we simply insert our magnetically striped card into a reader on the gas pump and within seconds we are authorized to purchase gas.

Obviously, in retail pharmacy we are not capitalizing on the use of technology to the same extent as the gas companies and the banks.

It is apparent to me that much of the workload concerns in our profession are caused by our poor use of technology. We must move rapidly to the use of standardized, electronically readable, prescription drug cards.

Since I began my limited study of this topic, I have learned that several groups are involved in trying to come up with solutions. Groups I am aware of include the National Council for Prescription Drug Programs (NCPDP), National Association of Chain Drug Stores (NACDS) and various state pharmaceutical associations. All of these efforts are to be commended, even though some of the efforts fo-

cus only on standardizing the printed card. However, this is not enough! We must have cards that when scanned, electronically transfer the information to the screen of the pharmacy's computers without any key strokes.

We must also rethink the claims processing strategy of requiring the drug store to submit information that the processor already has. When we access our bank accounts and our charge card accounts, we do not have to fill out an application each time.

It is time for action. Your association passed a resolution addressing this topic at the 1997 Annual Convention in April.

I believe that if one or two of the major players will implement a pharmacist-friendly card, the whole industry will follow suit. Only a few years ago did we install the first "black boxes" in pharmacies to submit prescription drug claims. It is past time to move on to the next level.

The people who are most inconvenienced by our present use of card technology are our patients. I believe that if we use only the technology that is being used at service stations across this country, the waiting time of our patients and the stress level of practicing pharmacists can be dramatically reduced.

In recent weeks this issue has been brought to the attention of the executives with one of the largest Rx Card companies. I have also met with Bob Shapiro and others at NACDS and have received their support. Please support your Association in our efforts to get this data entry automated— a function that is taking too much of your professional time!

NCPhA Committee Reports

Resolutions Committee

RESOLUTION: Third Party Drug Card

WHEREAS, patients often fail to provide necessary third party information to their pharmacist;

WHEREAS, pharmacists frequently spend an excessive amount of time dealing with third party claims due to lack of information;

WHEREAS, a universal claim card would expedite the transmission of third party claims in the pharmacy;

THEREFORE, BE IT RESOLVED that the North Carolina Pharmaceutical Association promote the establishment of a universal pharmacy third party card that can be easily read by computers via a magnetic strip.

BE IT FURTHER RESOLVED that a copy of this resolution be sent to all North Carolina pharmacy associations , as well as other national and state pharmacy associations.

Action: Approved

The preceding resolution introduced by President Jackson at the Annual Convention was approved by the membership on April 24, 1997.

Nominating Committee

The Nominating Committee of the NCPhA, in accordance with Article 1, Section 2 of the Bylaws of the Association, submits the following slate of candidates for office, subject to the mail ballot of the membership. Each candidate has expressed a willingness to serve if elected and does meet the criteria established in the Bylaws for nominees.

Those candidates receiving a plurality of the votes cast will be installed in their respective offices at the 1998 Annual Convention in Chapel Hill. The candidates are as follows: For the Office of the President Elect: Kevin L. Almond, Chapel Hill and Randy G. Ball, Wake Forest. For the Office of Member-at-Large of the Executive Committee (three to be elected for a two-year term of office) Ross Brickley, Clayton; Jennifer L. Burch, Durham; Jean B. Douglas, Greensboro; Larry E. Elliot, Winston-Salem; Kevin R. Layne, Eden; Gene W. Minton, Roanoke Rapids; Clarence B. Ridout, Morrisville; Larry N. Swanson, Buies Creek; William J. Taylor, Burlington; Joe R. Whitehead, Raleigh.

Biographical information and position statements for each candidate will appear in the January/February issue of the *Carolina Journal of Pharmacy.*

Employer/Employee Relations Committee

Over the past year, the members of the Employer-Employee Relations Committee worked hard to develop a salary survey to be distributed to all NCPhA members. This survey was distrubuted as part of the 1996 June/July issue of the *Carolina Digest*. Since the last salary survey was done over 10 years ago, the committee felt the Association needed to assess the working conditions of its membership. More specifically, the committee focused on the following: inadequate number of support personnel to handle the prescription volume, lack of work breaks and lack of time to complete patient counseling.

The reponses from the salary survey were received at the NCPhA central office over a six month period. Roughly 10% of the NCPhA membership responded to the inquiry. The results were then given to committee members for analysis.

The chart on the opposite page denotes the results of the salary survey.

SALARY SURVEY

		Chain	Indpt.	Hospital	Academic	Industry	Consultant	P. Health	HMOs	LTC	Other
# responses		96	63	28	6	6	6	4	4	4	13
Years in Practice		17.02	23.7	17	12	16	20	18	18	30	19
range:		3mo-47yrs	3-40yrs	5-33yrs	5-20yrs	1mo-36yrs	5-33yrs	12-25yrs	4-28yrs	24-39yrs	3-36yrs
Total hrs. worked/wk		39	46	39	47	48	50	38	42	41	40
range:		8-60hrs	15-60hrs	11-50hrs	40-60hrs	37.5-60hrs	40-60hrs	30-40hrs	10-65 yrs	32-50hrs	2-80hrs
Salary levels:	<40,000	4%	14%	10%	17%	17%	17%	25%	25%	15%	
$41,000	-49,000	26%	22%	10%	34%	0%	0%	25%	50%	25%	23%
$50,000	-59,000	57%	25%	36%	50%	0%	17%	25%		50%	38%
$60,000	-69,000	8%	17%	28%	0%	0%	17%	25%		25%	15%
$70,000	-79,000	0%	11%	11%	0%	0%	17%	0%			
$80,000	-89,000	3%	0.10%	4%	0%	17%	17%	0%			
	>90,000	3%	12%	0%	0%	66%	17%	0%	25%		8%
Benefits: Major Med		85%	48%	75%	unk	unk	unk	100%	75%	75%	
	family	47%	46%	54%	unk	unk	unk	25%	75%	25%	
Dental		81%	8%	47%	unk	unk	unk	75%	75%	50%	
	family	46%	3%	43%	unk	unk	unk	25%	75%	25%	
Retirement		74%	33%	96%	unk	unk	unk	75%	75%	25%	
CE	yes	26%	30%	46%	100%	unk	unk	25%	75%	50%	
		1.98%	5%	2.5%	2	unk	unk	3%	4%	2.5%	
Prof Dues	yes	15%	62%	39%	unk	unk	unk	0%	75%	25%	
	range:	50%-100%	unk	unk	unk	unk					
Vacation Days	5days	1%	1%	0%				0%	0%	25%	
	10days	51%	71%	29%				50%	33%		
	15days	31%	13%	47%				50%		25%	
	20days	11%	2%	18%				0%	67%	50%	
	range:	5-21 days	5-20days	12-56days	15-20days	avg 20days	avg 20days	10-15days	12-20days		
Sick/Personal		55%	36%	86%	100%			75%	50%	50%	
	avg	2.1 days	2days	14days	5days		12days	10days	10days		
	range:	1-30 days	1day	5-21days	1-12days			8-12days	7-12 days		
Other		unk	life ins	civic club dues	unk			401K,25%			
		unk	child care	life ins	unk						
Disability		57%	39%	61%	unk			50%	75%	50%	
Personal Malpractice		53%	59%	29%	unk			50%	50%	25%	
Maternity leave		26%	8%	1yr,3%	unk			75%	0%	0%	
Yrs. since last raise, %		1yr, 2%	1.5yr,6.7%	1 yr. 3%	1yr. 2.5%	1 yr. unk	9mo.unk	1yr,2.5%	9mo., 3%	12mo, 3%	12 mo., 3%
		1mo-2yr, 0.3%	6mo-10yr,1-10%	1mo-15mo,2-5%	1yr,1-5%	unk		8-24mo,2-3%	3-12,2.5%	3-24mo,2-4%	5-12 mo,2-5%
Support personnel	clerk/cashier	60%	79%	unk	NA	unk		0%	25%	50%	
	range:	1/2-4FTE	1-4FTE	unk							
	tech	68%	75%	75%	NA			67%	75%	100%	
	range	1/2-4 FTE	1-4FTE	1-15FTE				unk			
	Cert. tech	6%	14%	46%	NA			33%	0%		
	range	1-2FTE	1-2FTE	1-8FTE				unk			
Avg. # Rxs/wk		960	676	3500				525	6,000	2700	
		200-2200	125-1500	500-8000	NA			300-800	3,000-13,000	1800-5000	
Regular Lunch/break	yes	0.03%	29%	75%	100%	100%	50%	75%	75%	75%	
	avg time	30 min	1hr	30min	unk	unk	unk	45min	45min.	30min	45 min.
	no	99.7%	71%	25%	0%	0%	50%	25%	25%	25%	69%
Name tag/lab coat		100%	5%	100%	NA	50%	66%	75%	75%	75%	
Written Contract	yes	16%	15%	11%	33%	25%	17%	25%	25%	0%	39%
	no	84%	85%	89%	66%	75%	83%	75%	75%	100%	61%

1997
Convention Pictorial

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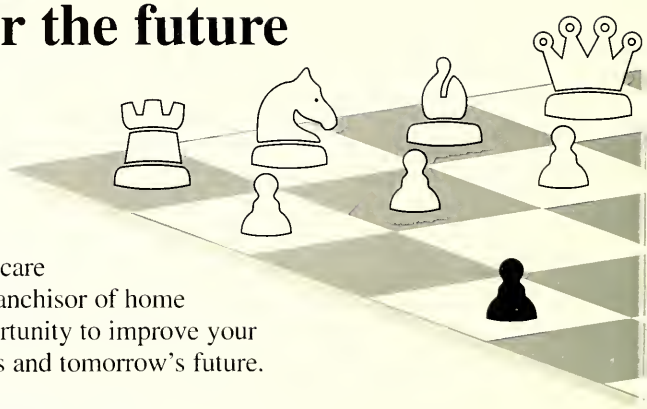

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1997 Award Recipients

The following individuals were recognized during the NCPhA Annual Meeting for their outstanding contributions to the profession of pharmacy.

Geigy Pharmacist's Mate Award ..... *Sandra C. Crouch, Asheville*
E.R. Squibb Presidential Award ..... *Phillip F. Crouch, Asheville*
DuPont Innovative Pharmacist Award ..... *William H. Morris, Waynesville*
NCPA Leadership Award ..... *Jimmy S. Jackson, Garner*
McKesson Award ..... *Jimmy S. Jackson, Garner*
Hoechst Marion Roussel
Distinguished Young Pharmacist Award ..... *H. Joel Pippin, Winterville*
Don Blanton Award ..... *Pamela U. Joyner, Morrisville*
Wyeth Ayerst Bowl of Hygeia ..... *William R. McDonald III, Hickory*
NCPhA President's Award ..... *Phillip F. Crouch, Asheville*
50-Plus Awards ..... *George B. Albright* ..... *Albert P. Rachide*
Paul B. Bissette Jr. ..... *William A. Simmons*
Herbert C. Mayberry ..... *John S. Williford*

Highlights of the Woman's Auxiliary Activities

The Woman's Auxiliary met throughout the 117th Annual Convention of the North Carolina Pharmaceutical Association in late April. This year's meeting was held at one of the group's favorite meeting places—the beach. Although the weather was a bit nippy in South Carolina's North Myrtle Beach, it did not prevent us from having a wonderful time taking part in all of our planned activities.

Our fun began the day we arrived as we received "goody bags" filled with sample products from NC Mutual Wholesale Drug Company. We then participated in a dessert demonstration with the Hilton's talented Chef Stevens. We sampled a variety of scrumptious desserts which he prepared on the spot. Fresh Fruit Tartes with a Grand Marnier Pastry Cream and Bananas Foster were two of our favorites.

Luckily, that evening we were able to dance off some of those exorbitant calories we so enjoyed earlier in the day to "The Joyce Hawley Band." All eyes were fixed on the Ginger Rogers and Fred Astaires of the group Mary Lou and Robert Worley, Peggy and Jimmy Jackson, and Daphne and Ralph Ashworth as they glided across the dance floor.

(Left to right) Betty Overman, Shirley Barricks, Yvonne Brown, Sandra Crouch, Jewell Oxendine, Frances Jones, Faye Welsh, Daphne Ashworth and Betsy Mebane.

The next morning we hopped on a bus to take us to the newest shopping haven in Myrtle Beach, "Broadway on the Beach." Several purchases later, we boarded the "Barefoot Princess" boat for a relaxing luncheon filled with singing entertainment as we cruised the inland waterway. What a fantastic afternoon!

Finally the event we all look forward to every year, the Opening Banquet, at which the Pharmacist-of-the-Year is announced. Before the exciting announcement, we listened and laughed with the keynote speaker, Ron Hyatt. The professor from UNC had us all chuckling at some point in the evening as he reminisced with funny stories. Our congratulaions to Henry Smith of Farmville who was named the 1997 Pharmacist-of-the-Year.

Our 70th Annual Business Session was held Saturday morning at the hotel. Reports were given and Vivia Creech gave a lovely memorial for member, Dot Pike of Concord, who died last September. Ashley Worley, daughter of Mary Lou and Robert, was our Page as she helped hand out a wonderful assortment of door prizes to attendees.

Our luncheon was held in "Another Word," the very top floor of the Hilton which has a magnificent view overlooking the ocean. During our lunch, we enjoyed a fashion show of "Weekender Clothes" presented by Kathy Meadows of Durham, daughter of Erie and George Cocolas. Models were Peggy Jackson, Faye Welsh, Neta Whaley and Mary Lou Worley. The luncheon was concluded with an installation service for our 1997-1998 officers given by Tracey Smith, followed by our Raffle Prize drawing. Congratulaions to all who won these terrific prizes and many thanks to all of you who participated. The Ways and Means Committee did such a great job and raised nearly $1900.

The last evening of the convention, many of us enjoyed country music stars, Patty Loveless and Ronnie Milsap. The shows were a great way to spend our last evening together.

My thanks to you, the Auxiliary, for the beautiful silver tray presented to me. You are "Keeping the Spirit" and I cherish the friends I made and the fun and fellowship we shared. Let us continue in the spirit as we remember our purpose of pride in pharmacy and needs of the Auxiliary.

Thank you for the opportunity to serve as President.

Betty Overman
President, Woman's Auxiliary, NCPhA

(Left to right) Betsy Mebane, Daphne Ashworth, Betty Overman, Jane Burton, Rebecca Work, Sybil Skakle, Neta Whaley, Shirley Barricks and Tracey Smith.

Special Thanks to Our Convention Contributors and Sponsors

NCPhA expresses sincere gratitude to all our convention sponsors. The companies listed below contributed their generous support to our meeting by providing speakers, continuing education programs, gifts and monetary support. Provided the opportunity, please extend your appreciation to the representatives of these companies for supporting your state association.

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1997 Exhibitors at the NCPhA Annual Meeting

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VIP Computer Systems, Inc.
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NC Board Inspector Retires

After 20 years of dedication and service, Bobby Belvin of Raleigh, NC is saying good-bye to law enforcement. Enforcing the law has been Mr. Belvin's passion since he began his career in 1959 as an identification officer for the city of Fayetteville in Cumberland county. In August of 1962 Belvin went on to work for Alcohol, Tobacco and Firearms in the mountains of Tennessee. However, it wasn't until 1977 that Belvin made it back to North Carolina when he heard of an opening for an inspector position with the NC Board of Pharmacy through the State Bureau of Investigation and the Executive Director of the NC Board of Pharmacy, David Work. Belvin took the position in 1977 and a year later was named Director of Inspections for the Board which he remained until last October when he semi-retired. During Belvin's semi-retired status, he has been staffing the office fielding NC pharmacy law questions while David Work is out traveling.

Reflecting on his many years of service with the Board, Belvin comments that as an inspector he had to be extremely proficient in the law in order to be effective in his position. This knowledge base allowed him not only to investigate the practices of pharmacies and pharmacists, but to become an important pharmacy law resource to the public and the pharmacists in and out of this state. "Many times people will call the Board with questions that demand answers right away," says Belvin. "It is very important to have someone readily available who is knowledgable about the law and David Work can't always be in the office." Informing and assisting the pharmacists and public has been very rewarding to Belvin throughout his career with the Board.

Moreover, wearing the inspector's hat has also given Belvin much personal gratification. "Cleaning up the profession," as Belvin calls it, "is removing the people from the profession that truly should not be there." The public is provided a level of insulation from harmful practices from the Board and their inspectors as they enforce a standard of quality. The Board is vigilant and committed to protecting the citizens of North Carolina by ensuring the profession of pharmacy is a safe and regulated practice.

When asked what Mr. Belvin will miss the most about his job, Belvin replied, "It's been a most enjoyable 20 years working with the people in this office and the people of North Carolina. I've had wonderful Board members and a very supportive staff, especially David Work." Upon retirement, Belvin asserts he will keep busy around the house and venture out saltwater fishing every now and then. His favorite type of fishing is for those pancake thin, bottom dwelling, both eyes on one side fish—commonly known as flounder. Perhaps the next time we'll see Bobby Belvin will be on the cover of the magazine, *Saltwater Fishing*, proudly displaying a 15 pound flounder.

Prescribing Outside of Specialty:

Refusing to Fill a Prescription

From time to time, it becomes necessary for a pharmacist to refuse to fill a prescription. One good example was brought to the Board's attention when a pharmacist refused to fill a prescription for Trisoralen® written by a gynecologist. She suspected that the prescription had been written for use by the patient's husband, and that the physician had not examined his wife. The pharmacist noted the boxed warnings on the package insert and justifiably refused to fill the prescription. The physician involved was irate but eventually understood when the matter was explained to him by staff from the Board of Pharmacy.

Some pharmacists seem confused about the ability of some practitioners to prescribe certain drugs. A brief review of the legal and ethical considerations seems necessary.

In state and federal law, the phrase "in the ordinary course of professional practice" often appears in definitions or descriptions of the prescribing activity. A prescription is an individual order, and does not, in and of itself, limit the scope of prescribing. The practitioner's prescribing authority depends entirely on his or her license to practice, which is issued by a professional occupation licensing board.

In theory, physicians have unlimited prescribing authority for humans. Their fundamental prescribing authority includes all human drugs ranging from common antibiotics used for upper respiratory infections to chemotherapy for cancer patients and cyclosporins as part of organ transplant therapy. But even physicians are not licensed to prescribe all drugs. For example, physicians cannot prescribe drugs for veterinary use.

Other practitioners are limited to their individual licenses to practice. Dentists, for example, cannot prescribe outside of treating conditions of the mouth. Under some circumstances, this can extend to such drugs as Nicorette® for health. Some tranquilizers might even be justifiable if ordered for patients who experience high anxiety when visiting the dental office. Such authority is not a blanket matter, however, as illustrated in one question posed to the Board office about a dentist prescribing 10 mg Valium® #100 for his mother-in-law, who lived with him and his family, for domestic tranquillity.

Veterinarians are limited to the practice of veterinary medicine and the treatment of animals. Optometrists can prescribe drugs to treat conditions of the eye or the adnexa, which is the orb surrounding the eye. Many practitioners, including nurse practitioners and physician assistants, can prescribe controlled substances if they have DEA registration numbers.

Of course, all of this is tempered by the general principle and Board rule that pharmacists can refuse to fill or refill prescriptions for any valid reason. A pharmacist who questions a prescription for a good reason can decline to fill that order. While it may be legally possible for a dermatologist to prescribe amitriptyline or lithium, a patient would most likely be better served by obtaining such therapy from a practitioner in the mental health field. Board rule clearly states that a pharmacist has both the right and responsibility to decline to dispense a prescription that is judged to not be in the patient's best interest or is potentially harmful. However, a prescription from the same dermatologist for a broad spectrum antibiotic for an upper respiratory infection does not present the same potential problems even though it may not be clearly within the practice of dermatology. The prescriber's broad mandate under a license to practice medicine would certainly cover that kind of order, even though it may be outside of their ordinary practice.

Although this area requires the individual pharmacist's judgment, it is not as clear-cut as some may think. The key is professional judgment, which should be familiar territory for pharmacists as we establish patient counseling as standard procedure.

The Board of Pharmacy column, a standing feature of the Carolina Journal of Pharmacy, is authored by David R. Work, Executive Director of the NC Board of Pharmacy.

Questions/Sugguesions

Do you have an issue or topic you wish to see addressed in the Board of Pharmacy column? If so, send your request to the *Carolina Journal of Pharmacy*, P.O. Box 229, Chapel Hill, NC 27514.

Welcome New NCPhA Members

The following have recently become members of the NCPhA. They join more than 2,200 colleagues in the Association who are committed to advancing the interests of pharmacy in North Carolina.

Jungeun Ahn, *Chapel Hill*
Amy Allen, *Winterville*
Michael Allen, *Knightdale*
Teresa Aparo, *Pompton Plain, NJ*
Daphne Ashley, *Timberlake*
Judy Baker, *Chapel Hill*
Jolynn O'Briant Bass, *Hope Mills*
Al Benthall, *Albermarle*
Charles Berliner, *Durham*
Jason Boonershire, *Stanley*
Dianne Bourke, *Morrisville*
Tiffany Bowman, *Greenville*
Nancy Boykin, *Pikeville*
Tayna Byrd Brewer, *Rockingham*
Larry Brookshire, *Asheville*
Gregory Brown, *Raleigh*
Lisa Brown, *Cary*
Jenny Calli, *Durham*
Andrew Canada, *Efland*
Diane Caracciola, *Las Vegas, NV*
C. Brian Chivers, *Pinehurst*
Carol Lankford Cross, *Browns Summit*
Janet Defee, *Hartsville, SC*
Andrew Dellinger, *Carrboro*
Dan Dewitya, *Rougemont*
Cindy Dollar, *Asheville*
Michael Dow, *Linden*
Heather Ludwig Durham, *Benson*
Julianna Stoke Fine, *Denton*
Tisha Fink, *China Grove*
Tracy Fitzgerald, *Zebulon*
Kristen Nash Foulks, *Greensboro*
Holly Geddie, *New Bern*
Sharon Greeson, *Raleigh*
Robert & Pam Guy, *Winston-Salem*
Heidi Grissom, *Greenville*
Leonard Hammon, *Greensboro*
Charles & Kelly Hartman, *Asheville*
James Hayes, *Marietta*
Jeremy Hodges, *Winston-Salem*
Gavin Houchins, *Raleigh*
Leigh Anne Huffman, *Hickory*
Cathy Huffman Huie, *Hayse*
G. Jason Ibraham, *Walnut Cove*
Melissa Depaoli Johnson, *Cary*
Lesley Foss King, *LaGrange*
Jung Eun Koo, *Charlotte*
Kim Kort, *Roanoke, VA*
Matthew Lanier, *Buies Creek*
Charles Lazarus, *Sanford*
Jason Lynn, *Lincolnton*
Jon Marks, *Rockingham*
Kristen Martin, *Statesville*
Bryan Monroe, *Raeford*
Amanda Mosley, *Chapel Hill*
Justine Panfen, *Charlotte*
Nila Patel, *Salisbury*
Caroline Phelps, *Gastonia*
Mary Linda Kristin Powell, *Fayetteville*
Gregory Poythress, *Elm City*
Michael Price, *Belmont*
Jill Propst, *Greensboro*
Robin Cook Reap, *Chapel Hill*
Karen Reeder, *Elizabeth City*
April Rogers, *Red Springs*
Stephanie Shaw, *Raleigh*
David Smithwick, *Chapel Hill*
Bonne Steger, *Cortland, NY*
Terri Storms, *Fayetteville*
Harold Tanner, *Denver*
Quyen Le Tran, *Chapel Hill*
Francisco Valls, *Jamestown*
Susan Waldrop, *Marshall*
Jing Wang, *Charlotte*
Kerri Watson, *Plymouth*
David Welch, *New Bern*
Gary West, *Falcon*
Charles Wetzel, *Winston-Salem*
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Sam Williford, *Pinetops*
Aaron Wright, *Franklinton*
Crystal Mayola Wyrick, *Chapel Hill*

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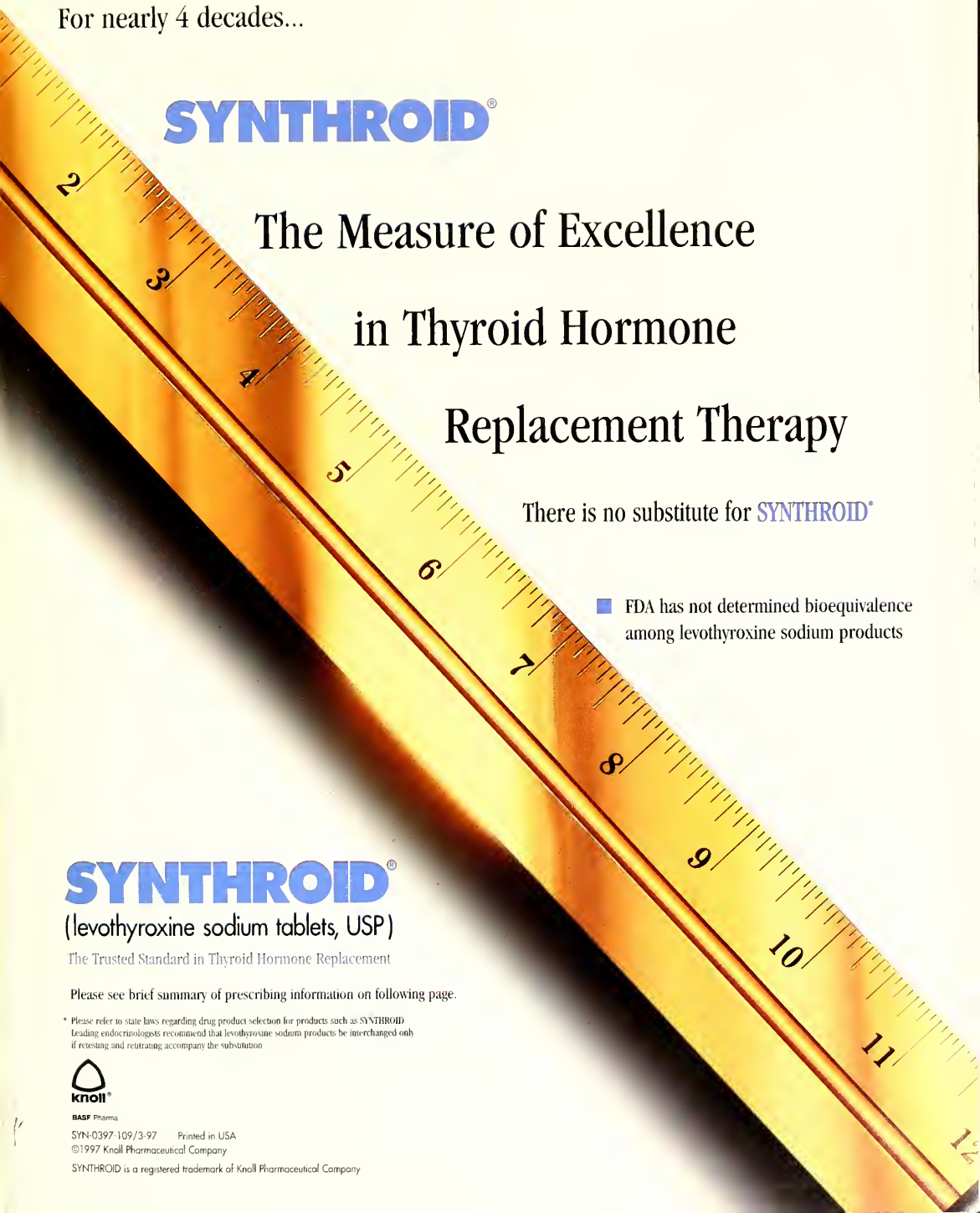

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CONTRAINDICATIONS SYNTHROID is contraindicated in patients with untreated thyrotoxicosis of any etiology or an apparent hypersensitivity to thyroid hormones or any of the inactive product constituents. (The 50 mcg tablet is formulated without color additives for patients who are sensitive to dyes.) There is no well-documented evidence of true allergic or idiosyncratic reactions to thyroid hormone. SYNTHROID is also contraindicated in patients with uncorrected adrenal insufficiency, as thyroid hormones increase tissue demands for adrenocortical hormones and may thereby precipitate acute adrenal crisis (see **PRECAUTIONS**).

WARNINGS: Thyroid hormones, either alone or together with other therapeutic agents, should not be used for the treatment of obesity. In euthyroid patients, doses within the range of daily hormonal requirements are ineffective for weight reduction. Larger doses may produce serious or even life-threatening manifestations of toxicity, particularly when given in association with sympathomimetic amines such as those used for their anorectic effects.

The use of SYNTHROID in the treatment of obesity, either alone or in combination with other drugs, is unjustified. The use of SYNTHROID is also unjustified in the treatment of male or female infertility unless this condition is associated with hypothyroidism.

PRECAUTIONS General SYNTHROID should be used with caution in patients with cardiovascular disorders, including angina, coronary artery disease, and hypertension, and in the elderly who have a greater likelihood of occult cardiac disease. Concomitant administration of thyroid hormone and sympathomimetic agents to patients with coronary artery disease may increase the risk of coronary insufficiency.

Use of SYNTHROID in patients with concomitant diabetes mellitus, diabetes insipidus or adrenal cortical insufficiency may aggravate the intensity of their symptoms. Appropriate adjustments of the various therapeutic measures directed at these concomitant endocrine diseases may therefore be required. Treatment of myxedema coma may require simultaneous administration of glucocorticoids (see **DOSAGE AND ADMINISTRATION**).

T_4 enhances the response to anticoagulant therapy. Prothrombin time should be closely monitored in patients taking both SYNTHROID and oral anticoagulants, and the dosage of anticoagulant adjusted accordingly.

Seizures have been reported rarely in association with the initiation of levothyroxine sodium therapy, and may be related to the effect of thyroid hormone on seizure threshold.

Lithium blocks the TSH-mediated release of T_4 and T_3. Thyroid function should therefore be carefully monitored during lithium initiation, stabilization, and maintenance. If hypothyroidism occurs during lithium treatment, a higher than usual SYNTHROID dose may be required.

Laboratory Tests Treatment of patients with SYNTHROID requires periodic assessment of thyroid status by appropriate laboratory tests and clinical evaluation. Selection of appropriate tests for the diagnosis and management of thyroid disorders depends on patient variables such as presenting signs and symptoms, pregnancy, and concomitant medications. A combination of sensitive TSH assay and free T_4 estimate (free T_4 index, FT_4I) are recommended to confirm a diagnosis of thyroid disease. TSH alone or initially may be useful for thyroid disease screening and for monitoring therapy for primary hypothyroidism, as a linear inverse correlation exists between serum TSH and free T_4. Measurement of total serum T_4 and T_3 resin T_3 uptake, and free T concentrations may also be useful. Antithyroid microsomal antibodies are an indicator of autoimmune thyroid disease. The combination of an increased TSH and positive microsomal antibodies in an euthyroid patient is a major risk factor for the future development of clinical hypothyroidism. An elevated serum TSH in the presence of a normal T_4 may indicate subclinical hypothyroidism. Intracellular resistance to thyroid hormone is quite rare, and is suggested by clinical signs and symptoms of hypothyroidism in the presence of high serum T_4 levels. Adequacy of SYNTHROID therapy for hypothyroidism of pituitary or hypothalamic origin should be assessed by measuring FT_4I, which should be maintained in the upper half of the normal range. Measurement of TSH is not a reliable indicator of response to therapy for this condition.

Drug Interactions The magnitude and relative clinical importance of the potential interactions between SYNTHROID and other drugs are likely to be patient-specific and may vary by such factors as age, gender, race, intercurrent illnesses, dose of either agent, additional concomitant medications, and timing of drug administration. Any agent that alters thyroid hormone synthesis, secretion, distribution, effect on target tissues, metabolism, or elimination may alter the optimal therapeutic dose of SYNTHROID.

Adrenocorticoids–Metabolic clearance of adrenocorticoids is decreased in hypothyroid patients and increased in hyperthyroid patients, and may therefore change with changing thyroid status.

Amiodarone–Amiodarone therapy alone can cause hypothyroidism or hyperthyroidism.

Anticoagulants (oral)–The hypoprothrombinemic effect of anticoagulants may be potentiated, apparently by increased catabolism of vitamin K-dependent clotting factors.

Antidiabetic agents (insulin, sulfonylureas)–Requirements for insulin or oral antidiabetic agents may be reduced in hypothyroid patients with diabetes mellitus, and may subsequently increase with the initiation of thyroid hormone replacement therapy.

β-adrenergic blocking agents–Actions of some beta-blocking agents may be impaired when hypothyroid patients become euthyroid.

Cytokines (interferon, interleukin)–Cytokines have been reported to induce both hyperthyroidism and hypothyroidism.

Digitalis glycosides–Therapeutic effects of digitalis glycosides may be reduced. Serum digitalis levels may be decreased in hyperthyroidism or when a hypothyroid patient becomes euthyroid.

Ketamine–Marked hypertension and tachycardia have been reported in association with concomitant administration of levothyroxine sodium and ketamine.

Maprotiline–Risk of cardiac arrhythmias may increase.

Sodium iodide (^{131}I and ^{123}I), sodium pertechnetate Tc^{99m}–Uptake of radioiabeled ions may be decreased.

Somatrem/somatropin—Excessive concurrent use of thyroid hormone may accelerate epiphyseal closure. Untreated hypothyroidism may interfere with the growth response to somatrem or somatropin.

Theophylline—Theophylline clearance may decrease in hypothyroid patients and return toward normal when a euthyroid state is achieved.

Tricyclic antidepressants—Concurrent use may increase the therapeutic and toxic effects of both drugs, possibly due to increased catecholamine sensitivity. Onset of action of tricyclics may be accelerated.

Sympathomimetic agents—Possible increased risk of coronary insufficiency in patients with coronary artery disease.

Laboratory Test Interactions A number of drugs or moieties are known to alter serum levels of TSH, T_4 and T_3 and may thereby influence the interpretation of laboratory tests of thyroid function (see **Drug Interactions**).

1. Changes in TBG concentration should be taken into consideration when interpreting T_4 and T_3 values. Drugs such as estrogens and estrogen-containing oral contraceptives increase TBG concentrations. TBG concentrations may also be increased during pregnancy and in infectious hepatitis. Decreases in TBG concentrations are observed in nephrosis, acromegaly, and after androgen or corticosteroid therapy. Familial hyper- or hypo-thyroxine-binding-globulinemias have been described. The incidence of TBG deficiency is approximately 1 in 9000. Certain drugs such as salicylates inhibit the protein-binding of T_4. In such cases, the unbound (free) hormone should be measured. Alternatively, an indirect measure of free thyroxine, such as the FT_4I may be used.

2. Medicinal or dietary iodine interferes with *in vivo* tests of radioiodine uptake, producing low uptakes which may not indicate a true decrease in hormone synthesis.

3. Persistent clinical and laboratory evidence of hypothyroidism despite an adequate replacement dose suggests either poor patient compliance, impaired absorption, drug interactions, or decreased potency of the preparation due to improper storage.

Carcinogenesis, Mutagenesis, and Impairment of Fertility: Although animal studies to determine the mutagenic or carcinogenic potential of thyroid hormones have not been performed, synthetic T_4 is identical to that produced by the human thyroid gland. A reported association between prolonged thyroid hormone therapy and breast cancer has not been confirmed and patients receiving levothyroxine sodium for established indications should not discontinue therapy.

Pregnancy: Pregnancy Category A. Studies in pregnant women have not shown that levothyroxine sodium increases the risk of fetal abnormalities if administered during pregnancy. If levothyroxine sodium is used during pregnancy, the possibility of fetal harm appears remote. Because studies cannot rule out the possibility of harm, levothyroxine sodium should be used during pregnancy only if clearly needed.

Thyroid hormones cross the placental barrier to some extent. T_4 levels in the cord blood of athyroid fetuses have been shown to be about one-third of maternal levels. Nevertheless, maternal-fetal transfer of T_4 may not prevent *in utero* hypothyroidism.

Hypothyroidism during pregnancy is associated with a higher rate of complications, including spontaneous abortion and preeclampsia, and has been reported to have an adverse effect on fetal and childhood development. On the basis of current knowledge, SYNTHROID should therefore not be discontinued during pregnancy, and hypothyroidism diagnosed during pregnancy should be treated. Studies have shown that during pregnancy T_4 concentrations may decrease and TSH concentrations may increase to values outside normal ranges. Postpartum values are similar to preconception values. Elevations in TSH may occur as early as 4 weeks gestation.

Pregnant women who are maintained on SYNTHROID should have their TSH measured periodically. An elevated TSH should be corrected by an increase in SYNTHROID dose. After pregnancy, the dose can be decreased to the optimal preconception dose.

Nursing Mothers Minimal amounts of thyroid hormones are excreted in human milk. Thyroid hormones are not associated with serious adverse reactions and do not have known tumorigenic potential. While caution should be exercised when SYNTHROID is administered to a nursing woman, adequate replacement doses of levothyroxine sodium are generally needed to maintain normal lactation.

Pediatric Use The incidence of congenital hypothyroidism is relatively high (1 in 4,000). Routine determinations of serum T_4 and/or TSH are therefore strongly advised in neonates in view of the deleterious effects of thyroid deficiency on growth and development.

Treatment should be initiated immediately upon diagnosis and generally maintained for life. If, however, transient hypothyroidism is suspected, therapy may be interrupted for 30 days after the age of 3 years to reassess the condition. If T_4 is low and TSH is elevated after that time, permanent hypothyroidism is confirmed and therapy should be reinstituted. If the T_4 and TSH remain in the normal range, a preliminary diagnosis of transient hypothyroidism can be made. Nevertheless, continued close observation with periodic thyroid function testing is warranted.

ADVERSE REACTIONS Adverse reactions other than those indicative of thyrotoxicosis as a result of therapeutic overdosage, either initially or during the maintenance periods, are rare (see **OVERDOSAGE**). Craniosynostosis has been associated with iatrogenic hyperthyroidism in infants receiving thyroid hormone replacement therapy. Inadequate doses of SYNTHROID may produce or fail to resolve symptoms of hypothyroidism. Hypersensitivity reactions to the product excipients, such as rash and urticaria, may occur. Partial hair loss may occur during the initial months of therapy, but is generally transient. The incidence of continued hair loss is unknown. Pseudotumor cerebri has been reported in pediatric patients receiving thyroid hormone replacement therapy.

OVERDOSAGE: Signs and Symptoms: Excessive doses of SYNTHROID result in a hypermetabolic state indistinguishable from thyrotoxicosis of endogenous origin. Signs and symptoms of thyrotoxicosis include weight loss, increased appetite, palpitations, nervousness, diarrhea, abdominal cramps, sweating, tachycardia, increased pulse and blood pressure, cardiac arrhythmias, tremors, insomnia, heat intolerance, fever, and menstrual irregularities. Symptoms are not always evident or may not appear until several days after ingestion.

CAUTION: Federal (USA) law prohibits dispensing without a prescription.

See Full Prescribing Information

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A Unit of BASF
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Injection Manufactured by
Ben Venue Laboratories, Inc.
Bedford, Ohio 44146 USA

For
Knoll Pharmaceutical Company
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The NC Center for Pharmaceutical Care

The North Carolina Center for Pharmaceutical Care (NCCPC) sponsored a one day educational program on "Reimbursement for Pharmaceutical Care" at Glaxo Wellcome. This grand kick off event attracted over 100 pharmacists from across the state. The purpose of the program was to encourage pharmacists to become practice innovators and to learn how to get reimbursed for their cognitive services.

Keynote Speaker Dan Buffington shares information about his pharmaceutical care driven practice in Tampa, FL.

Dan Buffinton, the keynote speaker, is director of Clinical Pharmacology Services, Tampa, Florida. He discussed his role as a pharmaceutical care provider and addressed how to get reimbursed for cognitive services, as well as, how to market pharmaceutical care. Local pharmacists who shared their experiences as pharmaceutical care providers included Joseph Edwards, Raleigh, NC; Peter Gal, Greensboro, NC; Harold King, Wilmington, NC; Bill Horton, Asheville, NC; and Jennifer Burch, Durham, NC.

As a follow-up to the kick off meeting, NCCPC is establishing regional pharmaceutical care workshops. The first set of meetings were held in June and focused on cognitive services implementation and reimbursement. The August meeting topic entitled "What is a Pharmaceutical Care Practice?" was held in the following locations: Asheville, Raleigh, Wilmington, Greenville, Winston-Salem, and Charlotte.

The mission of NCCPC is to create a new vision for pharmacy in North Carolina. One of the goals is to encourage pharmacists to become more involved in the patient's disease management and now is the time for pharmacists to make a difference. NCCPC was created to demonstrate and communicate the value and cost effectiveness of pharmaceutical care. The "Asheville Project" is demonstrating the cost effectiveness of this pharmaceutical care contribution to the management of diabetes and asthma. Meetings with payers, employers and pharmacist benefit managers are being held to communicate the value of reimbursing pharmacists for cognitive services. NCCPC is accomplishing its mission by assuring statewide training programs in disease management and conducting regional educational programs.

Anyone interested in attending the regional education programs or obtaining more information may contact NCCPC at PO Box 1313, Chapel Hill, NC 27574, or (919) 933-9709.

Submitted by Naini Sethi, UNC Pharmacy student and NCCPC student intern.

NCCPC Executive Director, Fred Eckel injects enthusiasm into his colleagues about the mission of the Center.

Bills Passed to Support Impaired Pharmacists

The NC General Assembly passed two bills that will allow the NC Board of Pharmacy to collect and disburse almost $80,000 annually to assist pharmacists recovering from drug and alcohol addictions. House Bill 948, "An Act to Allow the Board of Pharmacy to Establish a Recovery and Rehabilitation Program for Pharmacists," allows the Board of Pharmacy to use license fees to pay for the establishment of a program for impaired pharmacists. House Bill 933, "An Act to Increase Pharmacy License Fees," permits an increase in license and renewal fees to be used to fund the program. The legislation had been strongly supported by the North Carolina Pharmacist Recovery Network, a nonprofit organization that assists pharmacists with chemical dependencies.

Equity Bill Targets Mail Order Pharmacies

Third party health insurers offering mail order prescription drug coverage would be prohibited from using deductibles and other cost-sharing mechanisms to steer patients away from community pharmacies, under Rep. Nita Lowey's (D-N.Y.) new Prescription Drug Benefit Equity Act. The bill also bars health plans from charging high premiums to patients who use retail rather than mail service pharmacies.

Medicine Shoppe's Plan for Rating Pharmacists

Medicines Shoppe's new chainwide public awareness campaign asks consumers to choose their pharmacist based on a 12-point quality of care checklist. Among other things, Medicine Shoppe's rating system includes such criteria as: Does the pharmacist know you by name? Does the pharmacist speak with you directly? Does the pharmacist know your current health conditions and keep a medication profile on you? The chain will promote the checklist via television, print and point-of-purchase advertising.

McDermott and Yarborough Designated Fellows of ASHP

June McDermott, UNC School of Pharmacy, and Peggy Yarborough, Campbell University School of Pharmacy are among 49 pharmacists recently named Fellows of the American Society of Health-System Pharmacists (FASHP). The purpose of the program, introduced in 1987, is to recognize excellence in pharmacy practice and to promote public awareness of pharmacists who have distinguished themselves in the professional careers. The criteria for recognition include at least ten years of practice in a concentrated area of pharmacy, demonstration of sustained practice excellence, contributions to the total body of knowledge through activities such as publications and research in pharmacy practice and continued support of the profession. Fellows may use the intitials FASHP after their names, signifying sustained excellence in their pharmacy careers.

FDA Loosens Restrictions on Direct to Consumer Advertising

Pharmacists may be receiving more queries regarding prescription drugs from their customers in the days ahead. The increase in demand for information stems from FDA's recent announcement that they will no longer require television and radio advertisements for prescription drugs to carry full product information. However, the advertisement must offer an easily accessible means for the consumer to receive full product information. The FDA cites the use of 1-800 numbers and the internet as examples for providing this information. While many consumers will consult their physicians regarding production information, it is expected the pharmacist will be approached due to the fact they are easily accessible. Reports indicate pharmaceutical manufacturers will pour an enormous amount of money into this venue.

It's A Girl

Henry and Amy Rich Bowden announce the birth of their second child. Blair Julianne was born April 7, weighing 8 lbs. 15 ozs. Amy is a 1990 graduate of the UNC School of Pharmacy.

Narrow Therapeutic Index Drug Substitution Under Fire

Recent legislative initiatives introduced in California, Missouri, New Jersey, Ohio, Tennessee, Texas and Virginia could amend state drug product selection laws by imposing restrictions on pharmacists' substitution of generic drugs for those brand-name products that have a narrow therapeutic index (NTI). These initiatives have prompted debate within the practice of pharmacy and other health care professions causing many practitioners to question the motives for and necessity of such legislation.

Defining Narrow Therapeutic Index

A drug with a "narrow therapeutic index," or "narrow therapeutic ratio" as it is more accurately termed by the Food and Drug Administration (FDA), is defined as a drug which has: 1. less than a two-fold difference in median lethal dose (LD50) and median effective dose (ED50) values; 2.less than a two-fold difference in the minimum toxic concentrations and minimum effective concentrations in the blood; or 3. requires careful titration and patient monitoring for the safe and effective use of the drug.

Substitutions with nonbioequivalent NTI drugs may cause drug levels to rise above or fall below the desired therapeutic range, which can result in toxic effects or ineffective therapy.

Drugs classified within the proposed state initiatives as NTI drugs include warfarin, levothyroxine, digoxin, phenytoin, theophylline, carbamazepine, conjugated estrogens, valproic acid and lithium.

The NTI Debate

Opponents of the state legislative initiatives insist the FDA accurately assesses and compares the bioavailability of the various manufacturers' formulations of NTI drugs. They maintain that the FDA's determination regarding therapeutic equivalence (found within the FDA publication, *Approved Drug Products with Therapeutic Equivalence Evaluations*, also know as the "Orange Book"), including those for NTI drugs, sufficiently demonstrate that substitution of NTI drugs safe.

Further, opponents believe that legislative efforts will unnecessarily restrict substitution of less expensive generic drugs. They charge that the initiatives are a means by which brand name drug manufacturers are attempting to retain their market share.

Supporters of the proposed regulations contend patient safety is at stake. They argue that pharmacists' substitution of one manufacturer's formulation of an NTI drug for another can result in ineffective therapy or toxic effects due to differences in bioequivalence.

The primary advocate of the proposed anti-substitution laws is the Health Alliance for NTI Patient Safety (NTI Alliance), a non-profit organization whose initial funding is being provided by a grant from DuPont Merck Pharmaceutical Company.

The NTI Alliance believes individual states should ensure NTI drugs receive special consideration and are substituted "only with the express knowledge and consent of the patient and the treating physician." Its mission is to "communicate to all who make decisions about the availability of NTI medications that substitution of narrow therapeutic index drugs should never be mandatory, and that any substitution or interchange should take place only under strict guidelines meant to ensure each patient receives proper dosages at all times and under all conditions."

Opponents of the NTI Alliance initiatives contend state generic substitution laws already require physician approval for drug product substitution, and additional documentation of such approval would place an unnecessary burden on the pharmacist. They argue the pharmacist would most likely fill the prescription with the brandname product rather than completing the process necessary to obtain physician approval for the substitution.

Questioning FDA's Bioequivalence Standards

The FDA considers two formulations bioequivalent if their "rate and extent of absorption differ by -20% or +25% or less." The -20%/+25% rule "is based on a medical decision that, for most drugs, a -20%/+25% difference in the concentration of the active ingredient in blood will not be clinically significant."

The NTI Alliance has scrutinized FDA's current bioequivalency standards, claiming they exhibit a "one-size-fits-all" approach and do not reflect the special concerns of NTI drugs.

While the FDA has not specifically addressed the bioequivalency issue with regard to NTI drugs, the agency did examine developing individual bioequivalency criteria for each drug or class of drugs in 1986. As a result of its investigation, the FDA concluded that stricter criteria would be needed if a clinically significant difference could be shown between two drug products tested under the -20%/+25% standard. According to the FDA, no clinical data has been submitted in the past 11 years to warrant narrowing the -20%/+25% standard on any drug or class of drugs.

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Medicaid in a Minute

Did you know that...

- Medicaid is the second-largest program in state government;
- One in seven North Carolinians receives Medicaid;
- One in seven North Carolinians has no health insurance;
- 44% of babies born in North Carolina are covered by Medicaid; and
- 75% of nursing home patients receive some help from Medicaid?

About the budget

- Last year, $3.5 billion was spent on medical and long-term care services for over 1.1 million North Carolinians;
- 65% of service dollars are paid by the federal government;
- 5% of service dollars are paid by the counties,
- 30% of service dollars are paid by the state; and
- The cost of administering the program is 3.1% of the budget (state -1.4%; counties -1.7%).

Who is eligible?

- 830,000 women and children;
- 156,000 blind and disabled persons; and
- 168,000 elderly persons, who are also covered by Medicare.

Use of services

- Families (mostly women) and children cost the least. The average cost for adults in this category, which includes prenatal care and delivery, is less than $2,000 per year. The average cost per-child is less than $1,100 per-year for a comprehensive set of services. Families with children are the largest group of eligibles (72%), but spend less than 30% of the Medicaid budget.
- Blind and disabled adults and children are the smallest percentage of eligibles (14%), but the cost of caring for the mentally retarded, developmentally disabled, account for one-fourth of all expenditures for the disabled, serving about 5,000 recipients. The average cost of serving the disabled is $8,600 annually.
- Low income elderly may qualify for Medicaid in several ways. Medicaid acts as "Medigap" insurance for all Medicare beneficiaries whose income is at or below the federal poverty level ($658/month). The cost to Medicaid of paying monthly Medicare premiums, hospital and physician deductibles, and copayments is $1,200 per-person per-year. Around 43,000 North Carolinians qualified for this limited benefit last year. In addition, over 125,000 elderly persons received full Medicaid benefits, including nursing home services, prescription drugs and community services. Over 57% of all expenditures for the elderly were for nursing home services last year. The average cost of serving the elderly with full benefits is $9,100 per year. The elderly are 14% of the eligibles, but their expenditures equal 33% of Medicaid spending.

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Patient Counseling: Homeopathy, Part 2: Dosage Forms

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Principles of Homeopathy

The basic underlying principle of homeopathy is the Law of Similars, which holds that a substance that brings about symptoms in a healthy individual can be used to treat those same symptoms in a sick person. The belief is that "like cures like." These substances do not need to be therapeutically active. They can be simple dilutions of pharmacologically active substances that produce symptoms in healthy individuals which are similar to those of a particular disease process.

A professional development program made possible by an educational grant from

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German physician Samuel Hahnemann, considered to be the Father of Homeopathic Medicine at the turn of the 19th century, strived to restore the patient's health "in the least harmful way." He believed that more patients died from the *treatment* rather than the *disease*. His research was aimed at preparing progressive dilutions of a substance leading to an "infinitesimal dose," while still maintaining effectiveness. This was attained by "potentization" of the dose. The belief was that diluting a substance caused it to gain in its remedial properties. Progressive dilutions followed by vigorous shaking with each dilution produced a potency that cured disease without causing harmful side effects.

Homeopathic remedies are *natural* substances. Proponents believe they contain too little of the substance to do harm. They feel their belief is supported by the fact that FDA has not reported any substantiated claims of adverse reactions caused by homeopathic remedies, even though these drugs have been in use, in homeopathic dilutions, for many years.

Homeopathy has a humanistic and compassionate approach in considering each patient as a multi-dimensional human being. For homeopathic therapy to be successful, patients must be interested in improving their self image and self respect. Patients must be willing to be involved in their treatment decisions, get sufficient sleep and exercise, and eat a proper diet to improve their overall health.

The entire patient is taken into account in selecting therapy. Different remedies for the same disease may be recommended for different patients depending on their age, gender, physical characteristics, psychological factors, general health status and their physical environment.

The homeopathic marketplace includes both prescription and OTC products. Prescription homeopathic drugs require the following statement on their labeling, *Warning. Federal law prohibits dispensing without a prescription.* Homeopathic drugs are classified prescription-only if the substance can be toxic at the labeled concentration, or if it is to be ingested in quantities of one ounce or greater. If the medication cannot be labeled properly for unsupervised use, or if the condition requires physician diagnosis and monitoring, the drug will also be classified as prescription-only. Prescription homeopathic medicines are usually indicated for the same conditions as conventional (allopathic) drugs.

OTC homeopathic remedies are intended for self-diagnosable, self-limiting conditions. Patients who require special diagnosis or monitoring should not delay seeking appropriate medical attention. The OTC homeopathic medications must be labeled with the indications, dosage, precautions and any other statements that would be required on conventional OTC products.

For fixed combination drug products, FDA requires manufacturers to prove that all ingredients add to the total therapeutic effect, and that the combination provides greater effectiveness than any of its components alone. With allopathic drugs, it is felt that irrational use of combinations exposes patients to unnecessary side effects and increases the cost of therapy without therapeutic benefits.

When a patient wishes to switch from traditional therapies to homeo-

Table 1
Counseling Points for Patients Choosing Homeopathy

- Patients should inform allopathic physicians of their decision to try homeopathic therapy.
- Patients starting on homeopathic therapy should *not* discontinue previously prescribed allopathic medications abruptly .
- Homeopathic medications should *not* be used for serious, life- threatening conditions. Standard emergency treatment should be employed for serious illness.
- Patients receiving treatment from homeopathic physicians should follow instructions carefully.
- For homeopathic medications to work properly, the patient's mouth needs to be as clean as possible when the dose is taken. Plain tap water is recommended to rinse the mouth, rather than commercially available mouthwashes which may inactivate the remedy.
- Homeopathic medications are claimed to be most effective when taken 30 minutes before or 60 to 90 minutes after meals. Some are best taken in the morning, on an empty stomach.
- Homeopathic globules, pellets and tablets should be allowed to dissolve slowly and completely in the mouth, preferably under the tongue, for best absorption. It is best to avoid eating or drinking 30 minutes before and after a dose.
- Intake of alcoholic beverages, caffeine and nicotine should be reduced or eliminated. They are believed to interfere with the action of homeopathic remedies.
- If relief of symptoms does not occur within the time period stated on the product's labeling, if symptoms worsen, or if new symptoms develop, the homeopathic remedy should be discontinued and the patient should consult a health care professional.
- Homeopathic medications should be stored in a cool, dry place protected from heat and direct sunlight.

pathic medicines, the allopathic physician, the pharmacist and the patient need to work together to determine how the patient taking homeopathic drugs will be monitored. Some allopathic physicians may be reluctant to accept the philosophy of homeopathy, and the situation may necessitate the switch to a homeopathic practitioner. Homeopathic practitioners must be made aware of previous allopathic treatment. Some believe that, after lengthy treatment with allopathic drugs, the response to homeopathic therapy may be suppressed permanently, and homeopathic treatment will be ineffective.

Table 1 includes counseling points for those who choose homeopathic treatment.

Preparation of Homeopathic Remedies

Homeopathic medicines are prepared in three stages: preparation of the mother tincture, potentization and medication.

Mother tinctures are prepared through maceration, extraction, aging and filtration. Mother tinctures represent homeopathic medications in their most concentrated form. They can be clear liquids or solids.

Mother tinctures of plant or animal substances are prepared by grinding (macerating) the material in various strengths of alcohol. The ratio of alcohol to water depends on the relative dryness of the starting material.

Fresh plants are macerated with pure alcohol for the length of time described in the formula so that the alcohol can extract as much of the active substance as possible. The unfiltered liquid is then further diluted, according to the formulation, to a concentration from 33 to 87 percent alcohol. The macerated material is then extracted by treatment of a solution of alcohol and water. Extraction dissolves all of the therapeutic substances from the starting material. These substances are claimed to be extremely complex, and may include 30 or 40 active principles.

The suspension of solid material in the extraction is then aged by storing it in an amber glass container, in a cool, dark place, from one hour to one month, depending on formulation instructions.

The filtrate step separates the undissolved material from the liquid. Filtration uses gravity, pressure, or suction to produce a bright, clear liquid which is called the mother tincture. The remaining solid material is discarded.

Potentization involves diluting a substance to a point where it is more potent or curative. First, a number of clean flasks must be prepared. A portion from the first flask is diluted with the appropriate alcohol/water concentration in the second flask. That flask is stoppered and shaken vigorously. Then, one part of that solution is diluted with the proper amount of alcohol/water in the next flask. It is stoppered and shaken vigorously. This is continued until the desired dilution is attained.

Two serial dilution systems are used commonly. The *decimal series* involves one-part in ten-parts. The *centesimal series* involves one-part in one hundred-parts. The *millesimal series*, a lesser used system, dilutes the mother tincture in increments of one-part in one-thousand parts.

In the decimal system of dilution, the resulting product is referred to with the suffix *x* representing the Roman numeral X for 10. In the centesimal system, the dilution is denoted with the suffix *c*. Therefore, a homeopathic remedy that is identified as 3x has been prepared by taking one part of the mother tincture, diluting it with nine parts of the alcohol/water mixture and shaking it vigorously; taking one part of that and diluting it with nine parts of alcohol/water and shaking it vigorously; and taking one part of that and diluting it with nine parts of alcohol/water and shaking that vigorously.

Succussion is a term purportedly derived from the German words for "shaken vigorously or violently." After each dilution, the resulting solution is shaken violently, with impact on a surface that provides the desired result

without breaking the glass container. Hahnemann used a leather bound book. The succussion process should be repeated at least 10 times after each dilution, preferably (according to Hahnemann) at least 100 times. Today, machines do the work once delegated to human hands. Homeopaths claim that this not only insures a complete mixture of the substance, but it also energizes the potency.

For solids, the dilutions are made by triturating with lactose. The process helps solubilize otherwise insoluble minerals and chemicals, rendering the powder to a degree of fineness allowing it to be dissolved in alcohol/water. Using trituration, one part of the substance is finely ground with a small portion (aliquot) of lactose in a mortar and pestle. The trituration is continued for at least an hour with constant geometric addition of the remainder of the lactose at approximately 10 to 20 minute intervals. The resultant finely divided powder represents a centesimal triturated potency, because there is one part in 90 parts of triturate.

This process is repeated using one part of the first trituration and 99 parts of lactose to produce a second centesimal trituration, and so on until the proper numbers of dilutions have been made. It is believed that the physical grinding process of trituration provides the same energy that succussion does for liquid formulations. For each insoluble substance, a prescribed potency level is reached whereby it is diluted sufficiently to be within its solubility limit in an alcohol/water solution. Higher potencies can then be prepared using the liquid form of dilutions as explained earlier.

Medication is the stage in which the preparation can be taken by the patient. The pharmaceutical dosage forms used for homeopathic remedies are similar to allopathic medicines, i.e., tablets, pills, granules, powders, liquids, etc.

While allopathic tablets are produced by mixing the active ingredient with fillers and binders, and compressing them in a tableting machine, homeopathic tablets, pills, granules, and powders are prepared first with no active substance. The tablets are compressed using lactose and sucrose in an 80/20 ratio. After compression, the tablets are approximately 4mm in diameter. The pills are spherical globules of pure sucrose, also 4mm in diameter. The granules are pure sucrose, and the powders are pure lactose.

Solid forms of homeopathic pharmaceuticals are made by either dripping or spraying the liquid potency of the remedy onto a bulk solid form to be absorbed. This is a simplified explanation for a more involved process.

Sources and Dosage Forms of Homeopathic Remedies

Theoretically, every substance which can induce disease symptoms in a healthy individual is a potential homeopathic remedy. There are reportedly more than 3,000 known medications available for use in homeopathic medicine, nearly all of which are derived from natural sources such as plants, animals and minerals.

The major source, over 60 percent, are plants. There are reportedly nearly a half million plant species on earth, but fewer than 10 percent have been tested for therapeutic effects. Homeopaths are concerned about the number of plant species destroyed by pollution, destruction of rain forests, and plowing of virgin land for farming.

Table 2

Plant Components used in the Preparation of Homeopathic Remedies

barks	flowers	seeds
berries	fruits	shoots
buds	leaves	stems
bulbs		

While the whole plant can be used in the preparation of homeopathic remedies, only selected portions are normally utilized. See Table 2.

The entire plant is collected during the flowering season in warmer weather. Bark from nonresinous trees is collected in late autumn, while bark of resinous trees is collected during the season when the trees are blossoming and producing leaves. Berries, fruits,

Table 3
Representative Homeopathic Remedies

Homeopathic Name	Common Name	Claimed Uses
I. Plant Source		
Aconite	Monkshood	anxiety, chicken pox, neuralgia, sore throat
Allium cepa	Red onion	sneezing & watery eyes of colds
Belladonna	Deadly Nightshade	measles, mumps, pain, sore throat
Colchicum	Autumn crocus	gout, irritability
Hamamelis	Witch Hazel	bleeding hemorrhoids
Ipecacuanha	Ipecac	cough, nausea, nosebleed
Nux Vomica	Poison Nut	constipation, hangover, itching
II. Mineral Source		
Argentum nitricum	Silver nitrate	dyspepsia, headache, laryngitis
Hepar sulphuris	Calcium sulfide	abscesses, boils, wheezing,
Mercurius solubilis	Quicksilver	bad breath, chicken pox, diarrhea,
Plumbum metallicum	Lead	muscle spasms and weakness
III. Animal Source		
Apis mel	Honey Bee	insect bites, pain, swollen ankles
Sepia	Cuttlefish juice	dysmenorrhea, menopause

and seeds are gathered as they ripen; buds and shoots are picked as they form. Bulbs are pulled from the soil in early spring. Roots of annual plants are usually lifted after the seeds of the plant have ripened, and biennials are collected in mid-spring.

Animal sources of homeopathic remedies include honeybees, flies, cuttlefish, snakes and tarantulas. Thyroid is classified as both an allopathic and homeopathic remedy. Animal sources account for approximately 20 percent of homeopathic remedies.

Among chemical elements and minerals used in homeopathic remedies are arsenic, calcium, graphite, iodine, lead, potassium, selenium, silica, sodium and sulfur. Representative homeopathic remedies from various sources are listed in Table 3.

Dosage Forms

The most common dosage forms used in homeopathic practice are tablets, pills, granules, and liquids. Tablets are subdivided into hard and soft forms. Homeopathic **hard tablets** differ from allopathic tablets in that they contain no adjuvants. Rather, they are a mixture of 80 percent lactose and 20 percent sucrose. They are manufactured as placebos in tableting machines, and the homeopathic remedy is sprayed or dripped onto the tablet (medicated).

Until recently, homeopathic tablets were all round, double convex tablets of approximately 5mm in diameter and weighing 100mg. Extemporaneously prepared products remain in this form but, as of March 1996, all homeopathic tablets in interstate commerce must identify the manufacturer (not necessarily the ingredient) and be identified as a homeopathic remedy. As with allopathic drug tablets, e.g., sublingual nitroglycerin, products too small in size for mass marking are exempted from this requirement.

Soft tablets are made of pure lactose and are usually compressed by hand because lactose alone does not have the binding power of the 80/20 mixture with sucrose. The soft tablet dosage forms are used for solids prepared by trituration because they are too insoluble to use liquid potentization. In this instance, the homeopathic substance is incorporated with lactose and compressed into a tablet.

Pills and granules are prepared by spraying a saturated solution of lactose onto crystals in a rotating drum. Their size depends on the amount of time taken in their preparation. Pills are different sizes depending on the dia-meter. Granules are purposely made small, about the size of poppy seeds, for ease of administration to children.

Powders, suppositories, and ointments/creams are prepared in much the same manor as are allopathic drugs. **Liquids** are prepared as explained earlier and dispensed in dropper bottles. Since liquids contain alcohol, they fall under FDA's alcohol labeling regulations that became effective in March 1996. This rule stipulates that the alcohol content must now be included on the label of both the outside container and the product itself, and that the percentages cannot exceed 10 percent for adults and children over 12 years, five percent for children between six and 12 years of age, and 0.5 percent for children under six. Although homeopathic products must state the alcohol content on their labeling, they are exempted from the alcohol percentage requirements. However, many manufacturers are converting to a glycerin/ water base in an effort to keep the products below the percentage limitations.

Continuing Education Quiz

Patient Counseling: Homeopathy, Part 2: Dosage Forms

Please circle the correct answer. For information on how to submit this quiz for continuing education credit see the directions below.

1. Homeopathic medications are available on prescription-only status in all of the following instances EXCEPT:
a. if the manufacturer makes a therapeutic claim.
b. if it is ingested in quantities of one ounce or greater.
c. if the substance can be toxic at the labeled concentration.
d. if it cannot be properly labeled for self-medication.

2. All of the following counseling points for patients selecting homeopathic therapy are correct EXCEPT:
a. the medication is best taken 30 minutes before or 60 to 90 minutes after meals.
b. homeopathic globules, pellets, and tablets should dissolve in the mouth, preferably under the tongue.
c. when switching from allopathy to homeopathy, dis continue all medications right away.
d. reduce or eliminate your intake of alcoholic bever ages, caffeine, and nicotine.

3. The term *mother tincture* refers to:
a. the control solution used in clinical trials.
b. a fully diluted solution.
c. the unfiltered liquid form of medication.
d. the most concentrated form of homeopathic medication.

4. The first step in preparing a homeopathic medication is:
a. extraction.
b. maceration.
c. potentization.
d. succussion.

5. The solvent used to macerate fresh plants is:
a. pure alcohol.
b. pure water.
c. a mixture of alcohol and water.
d. neither alcohol nor water.

6. The solvent used in the extraction process of macerated materials in preparing homeopathic medication is:
a. alcohol only.
b. water only.
c. a mixture of alcohol and water.
d. neither alcohol nor water.

7. The diluent used to accomplish the trituration step in preparing homeopathic medications is:
a. dextrose.
b. fructose.
c. lactose.
d. sucrose.

8. Most homeopathic remedies are derived from:
a. plants.
b. animals.
c. minerals.

9. Animal sources account for what percentage of homeopathic remedies?
a. 10 percent
b. 20 percent
c. 30 percent
d. 60 percent

10. The homeopathic dosage form that contains 80 percent lactose and 20 percent sucrose is the:
a. granule.
b. hard tablet.
c. pill.
d. soft tablet.

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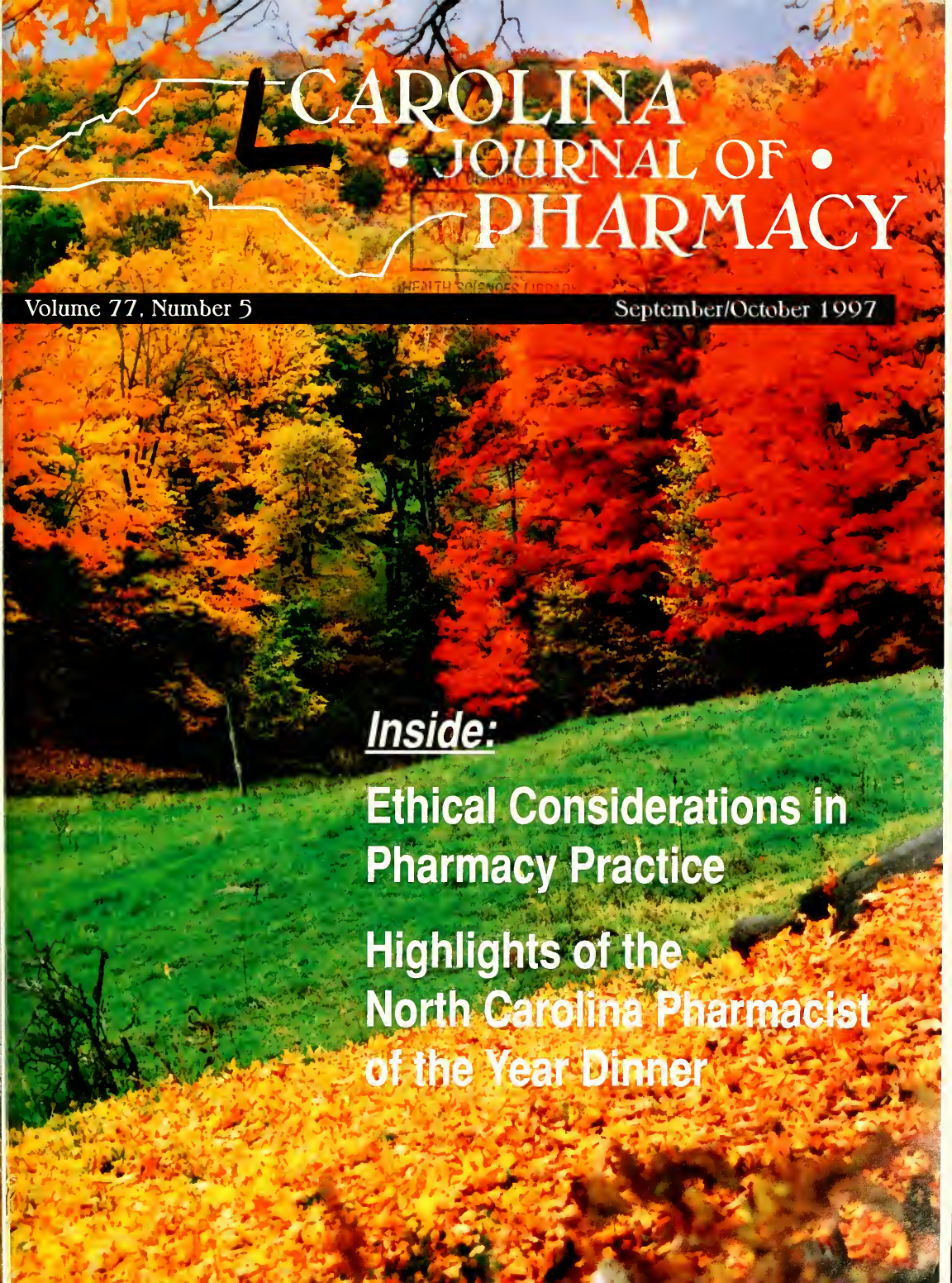
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CONTENTS

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Ethical Considerations in Pharmacy Practice

by Wayne W. Oliver, Vice President of Professional Relations and Governmental Affairs

Editor's Note: At the time of this article's original publication, the prescribing of the combination of fenfluramine and phenteramine (Fen-phen) was the standard practice.

The health care delivery system in Georgia and throughout the United States is undergoing a very rapid and comprehensive, system-wide transformation. According to researchers at Georgetown University's Woodstock Theological Center, "While politicians and their policy advisors debate the role that state or federal governments can or should play in this process, economic and business considerations are driving a massive restructuring of the way health care services are financed and delivered." However, pharmacists and other health care professionals must continue to take actions and make decisions daily about the business aspects of the provision of professional care and service. The changes in the health care delivery system, and the choices and decisions they are forcing health care professionals to make, however, are raising increasingly complicated and troubling ethical questions among thoughtful and responsible practitioners. Just what the practice of pharmacy needs at this time — additional challenges — ethical considerations. Recently, there have been several accounts of ethical questions in pharmacy which have been brought to national attention. Consider the plight of John Boling, a community pharmacist in California as relayed by the Associated Press in the Fort Wayne (Indiana) Journal Gazette.

"The best interest of the patient is the only interest to be considered."

Dr. William F. Mayo
Founder, The Mayo Clinic

Date: TUESDAY, MAY 27, 1997
Edition: Final; Section: A; Page: 1A
Article: DRUGGISTS INCREASINGLY SQUEEZED BETWEEN BELIEFS, LAW, PATIENT RIGHTS: PHARMACISTS' LOTS BECOMES TOUGH PILL TO SWALLOW

Written by: Jane Allen, Associated Press

(LOS ANGELES, CA.) – Fearing that she would become pregnant after a romantic night with her husband, Michelle Crider asked for help. Instead, she got a deadlock - with pharmacist John Boling. When her doctor, Myron Schonbrun, asked Boling to supply Crider with Ovral birth control pills - take two pills immediately, then two more within 12 hours - the pharmacy manager at Longs Drug Store in Temecula, Calif., refused.

"I kind of understood immediately," Schonbrun recalled. At that dosage, Ovral was a "morning-after" pill, meant to prevent a fertilized egg from implanting in the uterus, and Boling disapproved. But Schonbrun knew that though Crider deeply wanted another child, pregnancy made her deathly ill. So the doctor tried to finesse the problem. He asked Boling to provide a month's supply of Ovral, to be taken one a day, like any contraceptive. Boling again refused. He said he "knew what it was going to be given for," Schonbrun recalled.

Boling's revolt is just the beginning. With the FDA's recent proclamation that morning-after pills are safe and effective, corner pharmacists across America could increasingly find themselves in the middle of conflicts that pit personal beliefs against patient rights."

In the coming years, pharmacists will face even more serious moral and ethical challenges. The U. S. Food & Drug Administration (FDA) is considering approving the RU-486 abortion pill. Other states may follow Oregon's lead in legalizing medications for use in physician-assisted suicide. These type of ethical questions

place pharmacists in a Catch-22 situation. The American Pharmaceutical Association (APhA), with +8,000 members, supports a pharmacist's right of refusal - but says that right must not override a patient's right to treatment. According to the Associated Press, "pharmacists must find a way to accommodate their own beliefs, as well as those of the patient. That could mean referring a prescription to another pharmacist - a prospect that might satisfy neither the scruples nor the competitive fires of the community pharmacies."

However, the ethical considerations on today's pharmacists are only compounded by the practical pressures which most pharmacists face on a daily basis. "Ethics demands that it's what you ought to do for the patient, not for yourself," said Richard Abood, R.Ph., J.D., a Professor of Pharmacy Practice at University of the Pacific School of Pharmacy in Stockton, California. "The pharmacist might be a little repulsed to give it to another pharmacist, but . . . sometimes you've got to do things (in pharmacy) that are uncomfortable."

Ethical Issues with Specific Drugs

Now consider the case of a prescription for the combination of the drugs fenfluramine and phentermine (fen-phen). Last year alone, physicians wrote a total of 18 million monthly prescriptions for these drugs. Now, the medical community, in general, and the FDA more specifically, are raising ethical concerns with the medications. Consider the following press release issued by the Mayo Clinic:

(ROCHESTER, MINN.) – Mayo Clinic today reports a clinical observation of unusual valvular heart disease in 24 patients who had taken the weight-loss medications fenfluramine and phentermine (fen-phen). "We recommend that patients who are currently taking or considering fen-phen therapy discuss these findings with their physicians, who can help them weigh the benefits and risks of weight reduction therapy," says Dr. Heidi Connolly, Mayo cardiologist and primary author of the paper.

"We believe that these cases raise significant concern that this combination of appetite suppressants can have important implications regarding valvular heart disease," she continues, "but a more comprehensive study, which we are planning, is needed to make a definitive statement about the association."

Physicians and surgeons at Mayo noted the first case of valvular heart disease following fen-phen therapy about a year ago. Since then, Mayo physicians and Dr. Jack Crary, a cardiologist at MeritCare, in Fargo, N.D., have identified an increasing number of patients with similar problems, which led to this report. "We began to notice that otherwise healthy young women, presenting with this unusual form of valve disease, were also on fen-phen," Dr. Connolly added. "This caused us to further evaluate the possible correlation between fen-phen and valve disease."

The ethical questions raised in dispensing medications which have severe side effects are not new problems. However, in the past, pharmacists have been able to weigh the medical benefits of a particular therapy. Then, in conjunction with the prescriber, the pharmacist's ethical dilemma was often resolved. Unfortunately, the ethical considerations, which are now surfacing with increasing frequency, are typically not centered on medical decisions, but rather moral issues.

Yet another example of ethical issues involving specific medications must include discussions about the use of controlled substances by those individuals who either are or could become addicted to the medication. On a daily basis, pharmacists are placed in the uncomfortable position of making clinical decisions and professional judgment calls regarding these patients. To complicate this scenario, state and federal law enforcement officials rarely fully understand balancing professional judgment with laws and regulations concerning drugs which are addictive and prone to abuse.

Moral & Ethical Dilemmas

There are any number of ethical issues which can and should be drawn to the attention of pharmacists. Issues such as participation in needle exchange programs. It can be effectively argued that without such programs, blood borne diseases such as HIV will continue to escalate at alarming rates. From a public

to escalate at alarming rates. From a public health perspective, institutions such as the Centers for Disease Control (CDC) and the National Institutes for Health (NIH) have advocated needle exchange programs.

Recently, several state pharmacy organizations have adopted official positions regarding a pharmacist's professional role regarding the prevention of HIV which raise certain ethical considerations. The Canadian Pharmacists' Association (CPhA) believes "that preventing and limiting the transmission of the HIV, the virus which causes acquired immune deficiency syndrome (AIDS), is a national public health issue." According to CPhA policy statement, "Present scientific evidence indicates that the virus can be spread solely through the exchange of body fluids, for example, sexual contact, mother to infant fluid exchange, blood transfusion or the use of contaminated needles." Consequently, CPhA has adopted the following policy/position statement:

- HIV-infected persons and persons with AIDS are entitled to the same quality health care as all Canadians;
- The pharmacist has an ethical, moral and public responsibility to play a pro-active role in preventing and limiting the transmission of HIV and the spread of AIDS through:
  - i) the continued accessibility to the general public of latex condoms and the counseling on their proper usage as a preventative measure;
  - ii) the provision of needles and syringes to intravenous drug users as permitted under federal and provincial regulations and;
  - iii) the provision of comprehensive educational material on the subjects of HIV transmission and the spread of AIDS.
- Pharmacy must continue to encourage its research community, in concert with the broader scientific community, in an ongoing search for better and more effective drugs for the treatment of AIDS.

Just within this policy statement, CPhA raises complex social, moral and ethical issues such as needle exchange programs and counseling patients regarding HIV/AIDS prevention. As pharmacists become more involved in patient oriented care, ethical issues, concerns and considerations are going to increase.

The lives of practicing pharmacists are likely to continue to become even more complicated. For example, the 5,500-members of CPhA recently passed a resolution supporting pharmacy participation in the legal distribution of medical marijuana. Other ethical issues such as euthanasia, lethal injections and DNA technology including cloning, have only now begun to surface.

Professional Ethical Considerations

In a comprehensive analysis of the ethical considerations facing today's health care professionals, researchers at the Woodstock Theological Center at Georgetown University in Washington, D.C. published a document entitled "Ethical Considerations in the Business Aspects of Health Care." This treatise contends that society grants health care practitioners special status, privileges, and power because "of the specialized knowledge they must have. In exchange, health care professionals are expected to assume certain responsibilities and obligations, and to live up to certain standards of behavior." The researchers believe that this implicit, and sometimes explicit, agreement about the mutual expectations between professionals and society forms a "covenant of trust."

Codes of ethics are one of the ways that this covenant is articulated. Today, the ethical questions facing health care professionals are far more difficult than they have ever been in the past because the institutional arrangements which originally formed the basis of the "covenant of trust" are undergoing profound change. Additionally, Codes of Ethics were often developed in a vacuum without consideration of "real world" health care. As the health care transformation continues, new dilemmas and challenges arise that were not contemplated in the old covenant, the guidance given by earlier professional codes of ethics seems less and less adequate, and important values seem to be in jeopardy.

Business Pressures & Ethical Decisions

Pharmacists and other health care professionals have always been expected to provide some services without charge to those who could not pay, and to assist in society's provision of care to the indigent.

However, the evolution, or more appropriately stated, the revolution, in the financing of health care services and the transformation of the entire health care delivery system have changed all of the rules as it relates to indigent and/or uncompensated care.

The Georgetown University researchers indicate that "as recently as fifty years ago, most patients paid for health care services in this country directly, out of their own income, if they could. Although insurance pools to which patients belonged paid for some medical services, this was the exception rather than the rule." By way of example, in this bygone era, the decisions about whether to treat a particular patient, or what tests or therapies to use, or what fees the professional would be paid for those services, were regarded as private decisions between the practitioners and their patients. Many ethical problems that arose for professionals in this environment involved the potential conflict of interest between the needs and interests of the patient and the desire of the practitioner to do research or to enhance his or her income. Hence, as Edmund D. Pellegrino and David C. Thomas determined, a key issue addressed in earlier codes of ethics for physicians, pharmacists and other health care professionals was the requirement that practitioners place the interests of their patients above their own interests, and care for all who need assistance "with equal concern and dedication, independent of the patient's ability to pay." In that bygone era, because of a practitioner's moral and ethical fibre and his/her ability to "make up" for uncompensated care through cost shifting, virtually every patient who needed medical care and/or drugs received those services and products. With a fundamental change in the health care system where a majority of patients are covered by some third party plans and with the evolution of managed care placing pressures on provider reimbursement, health care providers can no longer shift the costs associated with uncompensated care to other third parties and therefore, providers can no longer afford to provide uncompensated care. Therefore, managed care plans, insurance companies and the health care delivery system itself are all placing incredibly difficult ethical scenarios at the feet of pharmacists and other health care providers.

In the community pharmacy setting, the passage and implementation of OBRA '90 requirements has raised a number of ethical concerns and scenarios.

In the chain pharmacy operation, employed pharmacists have to attempt to balance the pressures of increased numbers of prescriptions due to the managed care environment with state law mandating that every patient have the opportunity to be counseled. Further complicating this imbalance in the chain environment is the pharmacist's professional responsibility regarding patient care and the fatigue factor by dispensing more and more prescriptions with fewer and fewer resources. Additional ethical complications are raised when employee pharmacists attempt to address these professional concerns with members of the management team and find themselves in the position diametrically opposed by those in positions of authority.

In independent retail community pharmacies, the balancing act is equally as precarious. The pharmacy owner must attempt to balance professional concerns for patient care with business interests. Community pharmacists also contend that managed care plans and insurance companies are inappropriately making clinical decisions for patients instead of physicians and pharmacists. Managed care entities are currently perverting formularies to the detriment of quality patient care. Rather than basing the formulary decision-making process on the best judgment of physicians and pharmacists working together treating patients locally, some managed care plans are designing inflexible, national formularies for enrollees in ways which give medical practitioners and pharmacists little or no input. Combined with inflexible rules for enforcing formulary decisions which are exclusively based on the size of financial rebates and kickbacks, this approach to health care is not in the patient's best interest — the single most important ethical consideration.

Today, the ethical questions facing health care professionals are far more difficult than they have ever been in the past because the institutional arrangements which originally formed the basis of the "covenant of trust" are undergoing profound change.

In the managed care environment or mail order drug operations, pharmacists have other ethical issues. The financial incentives are high for pharmacists who convince prescribing physicians to "switch" to a more preferred brand name drug product. In other instances, mail order pharmacists have been directed to issue

a 90-day supply of medications regardless of what was indicated on the prescription drug order.

How Pharmacy Schools Address Ethics Considerations

Recently, faculty members at the University of Georgia College of Pharmacy were asked by the Georgia Preceptor to describe the ethics components of their curricula. Faculty member and Tenth Region President Flynn Warren, Professor of Pharmacy Practice, responded: "What I cover is an awareness raising introduction to problems that will be faced in practice. This is intended to get (students) to understand that their personal beliefs and ethics will be called [on when they] respond to some situations."

With his students, Mr. Warren shares some examples of ethical considerations which could arise in the ordinary practice of pharmacy:

- •Dispensing medications for an abortion;
- •Dispensing medications for physician assisted suicide/euthanasia;
- •Participating in a cardiac arrest team when the decision in made to discontinue further treatment;
- •Handling a dispensing error with the patient involved;
- •Handling supervisor pressure to do the wrong thing; and
- •Dispensing medications for persons with AIDS or some other disease you believe to be "immoral."

The Ethics of Patient Confidentiality & Medical Records

Pharmacists and other health care professionals should never divulge the intimate details of a patient's illness or condition without permission, except as required by law. Georgia passed a law several years ago protecting patients' prescription drug records. The statute, which was offered by GPhA to the legislature, states that pharmacists can not be compelled to release patient specific information including drug regimens, etc. without a court order, subpoena or a written release by the patient. Exceptions should be considered only for the most extreme justifying reasons, as, for instance, the threat of serious harm to the patient or to other individuals at risk by exposure to the patient. Decisions in such cases should be subjected to intense ethical scrutiny. Third-party payers should request only the information they need, and should tightly restrict the use of personal information about individual patients. No one should be in the position to profit from the sale or use of patient specific data or information. Patients coming into the system for any reason should be alerted as to what information is recorded, how it is used, who will have access to that information, and what these rules may mean to the patient. [Editor's note: North Carolina pharmacists are not empowered to release information on good faith in a crisis. Should we consider such legislation?]

Ethical "Red Flags"

As stated by Flynn Warren, there are certain ethical scenarios which may develop which pharmacists can already identify and attempt to address. The Woodstock Theological Center at Georgetown University created a checklist for health care professionals to consider:

- •Personal Decisions in Individual Cases
- •Inadequate Resources to Meet All Needs
- •Profiting from Patient Utilization of Specific Resources
- •Rules and Regulations Conflict with Professional Judgment
- •Truthfulness in Conflict with Patient Confidentiality
- •Patients' Behavior Contributes Significantly to Their Problems
- •Rapidly Emerging New Technologies

Additionally, there are several check points which can assist pharmacists and other health care professionals in assessing ethical problems including:

- •When Deciding Whom to Treat, and How to Allocate Scarce Resources in Short-term Crisis Situations;
- •When the Needs of My Patients or My Community Exceed My Capacity to Provide Uncompensated or Undercompensated Care;
- •When Confronted with Opportunities to Invest in Testing Services or Ancillary Medical Services;
- •Administering Resources and Serving My Patients in a Cost-Conscious Way;
- •Whenever the Rules and Regulations of Third-Party Payers Conflict with My Professional Judgment, and
- •Ordinary Record-keeping and Billing.

While these two lists are certainly not a comprehensive tabulation of ethical scenarios with which pharmacists may be forced to deal, these examples may assist practitioners in beginning to consider the ethical implications of

their practice.

Conclusion

Certain ethical dilemmas will always exist in the field of health care — particularly, as a new health care system evolves. Ethical considerations will always be part of pharmacy so long as health care retains a business component. Regardless of the systemic reforms that may occur within the health care system, pharmacists and other health care professionals must acquire or develop the appropriate tools to help practitioners find their own way through the ethical mazes they will confront.

Some of these tools and guides health care professionals will be able to find through their previous education in the humanities and the social sciences; some will find guidance through reflection on the religious and professional values and traditions that view health care as much more than a business enterprise providing a consumer commodity or health care service; still others will find direction by keeping their sense of the ultimate meaning of what pharmacy is and by renewing their own commitment to the ideals and goals that first drew them into pharmacy. This article could also serve as such a tool.

With technological breakthroughs such as generic engineering and social and moral issues such as the euthanasia, lethal injections as a means to carry out the death sentence, the sale of tobacco products and abortion, pharmacists will face even more serious moral and ethical challenges in the future. The choices and decisions of health care professionals are inevitably shaped by the health care environment, institutional and cultural context. Institutional arrangements embody certain cultural messages about what constitutes appropriate behavior and proper activities. Policies and customs can help to clarify responsibilities and support ethical decision making, or they can exacerbate conflicts of interest, create incentives for unethical choices, and undermine accountability. Because ethical decision making is so important to healthy human relationships, institutional arrangements that send contradictory messages about what is appropriate, or that undermine or discourage ethical decision making, are socially destructive.

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PROPOSED
1997 NCPhA Code of Ethics Revision

The Ethics, Grievance & Practice Commitee worked diligently over the past year to revise the NCPhA Code of Ethics. The Committee focused on creating an "updated" version of the Code of Ethics which would reflect issues specific to today's pharmacy practice settings.

This revised version is being published for you, the members of the Association, to review and submit any comments or suggestions to the Exective Committeee before the revision is adopted. Please send your comments to the Association central office: NCPhA, Attn: Code of Ethics, P.O. Box 151, Chapel Hill, NC 27514-0151.

PREAMBLE

Pharmacists offer a unique and specialized body of knowledge in the pharmaceutical sciences, drug therapy assessment, drug information and other related domains; serve internships, learning from experienced, practicing pharmacists; and offer completion of strict license requirements that are annually updated. While other science-trained graduates may possess knowledge from some of the pharmaceutical basics, the pharmacist is trained in detail sufficient to apply this knowledge to the individual patient.

In order to serve the public health and welfare, law is established to restrict the practice of Pharmacy to persons with special education and training whose qualifications and demonstrated competency grant them license and privilege denied to others. Being a professional requires its practitioners to consider the needs of the patient paramount, a basic and fundamental component for the unselfish concern for the welfare of others. Accordingly, Pharmacists recognize their responsibility to their patients in facilitating treatment and preventing drug related problems and worsening of disease.

These principles of professional conduct for Pharmacists are therefore established to guide relationships with patients, the public, fellow practitioners, and third party payers.

CODE

Section 1

Pharmacists must hold the health and safety of patients as their first and primary consideration. Pharmacists must make decisions that will improve the health and safety of the patients before considering pharmacoeconomics.

Section 2

Pharmacists should provide medications, medical devices and accessories that are safe and effective and that meet the recognized standards of quality. They should never condone, support nor assist in the distribution of any drug or drug paraphernalia used to facilitate, or intended or designed to facilitate, violation of law.

Section 3

Pharmacists should strive to identify and research those drug related problems that will impact the health of patients. In so doing, continued learning and competency is expected.

Section 4

Pharmacists have the duty to observe the law, to uphold the dignity and honor of the profession, and to accept its ethical principles. They should not engage in any activity or organized medical plan that may harm patients or require activity that is not in the patient's best interest. Likewise, they should not bring discredit to the profession in any way. They should expose illegal or unethical conduct in the profession or related fields. The practice of pharmacy by drug and/or alcohol impaired practitioners is unethical. If such impairment is observed by another Pharmacists, it is the responsibility of that Pharmacist to intervene accordingly. Failure to do so is unethical.

Section 5

Pharmacists should not agree to, nor practice under, terms or conditions which may impair the appropriate application of pharmaceutical/pharmacist care or may deteriorate the pharmacist-patient relationship. This includes allowing non-pharmacists to make pharmaceutical decisions.

continued on page 20

Henry Smith Honored as 1997 Pharmacist of the Year

On one of the hottest days of the summer, August 15, more than 200 people gathered at the Rock Springs Equestrian Center, just outside Greenville, to recognize the contributions of Henry Lewis Smith of Farmville, the 1997 North Carolina Pharmacist of the Year.

In the audience were professional colleagues, friends, neighbors and relatives, all of whom were paying tribute to this outstanding pharmacist, who received this most prestigious award for "distinguished service in Pharmacy, Public Health and Community Involvement." A reception hosted by the Smiths preceded the dinner complete with a three-foot cake proclaiming Henry's award, which wound up being the dessert for the elegant dinner.

The program, in which friends discussed why they thought Smith had been selected, was moderated by NCPhA president Jimmy Jackson. The invocation was delivered by the pastor of Smith's church, Mr. Thomas Tunstall. After dinner, six of Smith's friends talked about him. First was Joe Kue, R.Ph., Commissioner of the Town of Farmville and owner of Kue's Pharmacy. Joe, as a local elected official, welcomed everyone to Farmville.

Reverend Tunstall remarked that Henry was a staunch member of the Educational Foundation and he was somewhat expecting a leader of the Foundation to attend the dinner and program to express their appreciation for the support from Henry and Tracey. Reverend Tunstall used the simile of grinding powders in a mortar and Henry's grinding down the opposing views when something in the church needed to be done or fixed, such as a new roof on the church. Tunstall told a bit about Henry growing up in Fountain. His father, Ed Smith was a farmer and owned his own land. Tunstall said Ed Smith might have been the only Republican in the state of North Carolina for a long time.

Mark Owens, local attorney and chairman of the Pitt County Board of Commissioners then talked about Henry from the perspective of an elected official of the County, and told how much Henry had benefited the area and what a good corporate citizen he was.

Al Lockamy from Raleigh, last year's recipient and a frequent traveler with his family and the Smith family, told of some of his experiences with Henry. Lockamy always seemed to get the suite overlooking a garden, while Henry looked out on some dismal view. They enjoyed each other's company on these trips, making the traveling more enjoyable. Lockamy, like Paul Harvey, was determined to tell "The Rest of The Story." We might title this talk "The Road Best Traveled with Friends." And I do mean friends, said Lockamy. He told how Henry and Tracey met, and the fun they had on the Fly/Cruise CE cruise in 1979, where Henry was exposed to the fine art of "shopping" in Nassau.

Judge Jack Lewis of Raleigh, a member of the North Carolina Court of Appeals, and a relative of the recipient (as most of the people within a fifty mile radius seemed to be) talked about being kin to Henry. He remarked how well Henry was doing in his business, and postulated that Henry had developed a process for making sorbitol from tobacco stalks. Judge Lewis, because of who he was, was believable to a fault. He said Henry Lewis is a man of unfailing courtesy and yet has the Midas touch. Judge Lewis concluded his remarks with "Henry Lewis is a true and loyal son of North Carolina, and indeed the South."

Ron Maddox, dean of the Campbell University School of Pharmacy, told what an impact Henry (and Tracey) had on the school. Smith is a graduate from Campbell in chemistry and has served on many boards at the school. Henry recently served as president of the Alumni Board. Dean Maddox noted that Henry received the 1990 Distinguished Alumni Award. Henry has served the School of Pharmacy well, as a member of the Founders Committee, as a member of the Dean's Advisory Committee and a preceptor. Henry is a superb role model, and the Campbell University family was so pleased when Hannah, a special person, came into the family.

The final speaker, Al Mebane, has been a friend of Henry for over 20 years, and when Henry served as president of the NCPhA, Al was the chief staff employee. Henry and Al traveled all over eastern North Carolina, and Henry always seemed to know a short cut, which service stations were open after 11:00 p.m. and usually about half the people in whatever audience we were addressing. People seemed to instinctively know that Henry liked them! Mebane said he has been a positive force in pharmacy in North Carolina for many years. He was loved and respected by his students when he was on the faculty at UNC, and without exception, they remember Henry Smith with affection. So do we.

Jimmy Jackson, president of the Association, presented the Mortar and Pestle Award to Henry Lewis Smith for "Distinguished service in Pharmacy, Public Health and Community Involvement." No better choice could be made this year.

New Compounding in New Wine Skins

Compounding has been in the news lately with the introduction of the Compounding Preservation Act of 1997 (H.R. 1060) by Congressman Richard Burr (R-NC) and co-sponsored by Congressman Tom Delay (R-TX) and Gary Condit (D-CA) and a companion Senate FDA Reform bill. Less in the news is the restructuring of compounding at the UNC-CH School of Pharmacy. The restructuring is progressing within the five semester Pharmaceutical Care Skills Laboratories, and attempts to retain the best of the Pharmaceutics Laboratories and the now discontinued Dispensing and Compounding Lab.

Several elements of the restructure have been completed. The compounding laboratory procedures have been critically reviewed by faculty; the outcome of their efforts can be viewed at the Web-site www.unc.edu/courses/phar0511. Our on-campus students are currently using the Web-site. It is anticipated that qualified reviewers outside of the School will become involved in the development of new compounding exercises.

The routine analysis of compounded student prescriptions has been instituted. The primary reason for this work intensive commitment is to insure that our students develop accurate compounding skills. Analysis of each product means that students are individually assessed as to their competency; those needing remedial instruction receive it. A type example of the extent of the effort being made has been published (1). The emphasis on analysis has also involved the compounding laboratory in some interesting legal cases (2, 3).

I recently attended the "Student Compounding Training Course" at the Professional Compounding Centers of American (PCCA) in Houston, Texas. The two-day, sixteen hour course was attended by 80 students from 27 Schools of Pharmacy and was designed to acquaint students with current and novel compounding practices and possibilities. PCCA moved into their present location within the last year, which has a state-of-the-art compounding laboratory, lecture hall and parenterals suite.

PCCA is a commercial venture focusing on helping retail pharmacists provide compounding services. During the training session, the staff primarily discussed compounding skills and how retail pharmacists could use these skills in their practice. Several market populations were mentioned, and examples were cited of pharmacists who had made compounding their sole business service. A minimum amount of time was spent discussing compounded prescription pricing, and the physical plant and inventory needed to begin or expand a compounding service. The majority of time was spent in the laboratory actually compounding products.

Since this was a student training course, emphasis was placed on the excitement of compounding, and not the issues of quality assurance, record keeping, government regulations, etc. During the four laboratory sessions, students compounded carbomer and cellulose gels, and a lecithin pluronic gel, which is popular as a scopolamine and NSAID delivery vehicle. Among the semisolids, students made a lip balm, suppositories and an emollient cream base. Of the solid dosage forms, tablet triturates were demonstrated, a capsule machine was used to make 100 capsules and troches in a variety of flavors (chocolate, peanut butter) were compounded. Students were allowed to take all of their products with them at the conclusion of the course.

PCCA offers two courses for practitioners. One is a three-day course dealing with compounding, and the other is a two-day course on aseptic compounding. Additional information about the courses can be obtained at 1-800-331-2498 or www.compassnet.com/~pcca. Many of the things demonstrated during the course will impact the compounding laboratories at UNC. Although I was not the "traditional" pharmacy school student, I learned that many aspects of our course work can be improved. Those improvements should continue to prepare our students to be competent compounders, a unique aspect of pharmacy, and an aspect worth preserving via national legislation.

Bob Shrewsbury, Ph.D., Associate Professor, Division of Pharmaceutics, UNC School of Pharmacy

References

1. Hadzija BW, Shrewsbury RP: Two basic pharmacy courses with strong experimental (laboratory) components. Journal of Pharmacy Teaching 5:41-50, 1996.

2. Hadzija BW, Shrewsbury RP: Atropine overdose with a suppository formulation containing atropine sulfate. International Journal of Pharmaceutical Compounding 1:271-273, 1997.

3. Hadzija BW, Shrewsbury RP: Determination of hydrocodone in Tussionex extended-release suspension by high-performance liquid chromatography (HPLC). Journal of Forensic Science 41:878-880, 1996.

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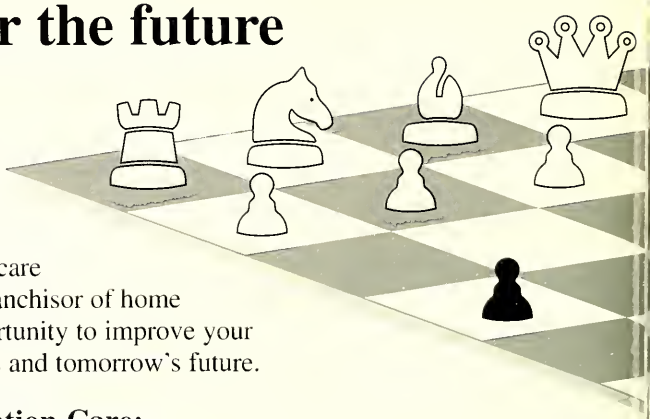

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NCCPC Presents Videos on Reimbursement for Pharmacetucal Care

The North Carolina Center for Pharmaceutical Care (NCCPC) presented a one-day educational program, May 16th at Glaxo Wellcome Inc. in Research Triangle Park, NC. The program introduced the mission of NCCPC, as well as presented methods to deliver and get paid for pharmaceutical care and ways to reengineer pharmacy practice sites to provide it.

Because of the success of the programs and the tremendous amount of positive feedback, NCCPC has made available video cassettes of the program. The videos come in a set of two tapes. Tape one presents Dan Buffington, director of Clinical Pharmacology Services in Tampa, Florida as he discusses how to get reimbursed for providing cognitive services. Buffington reveals strategies for reimbursement and how pharmacists can establish a referral network and evolve their pharmacy practice.

Several innovative North Carolina pharmacy practitioners also share their experiences as pharmaceutical care providers on tape two. These presentations discuss North Carolina practitioners experience with reimbursement, disease state management and pharmacy layout and design.

Videos can be ordered by mailing $15 for either tape or the set for $25 to NCCPC, P.O. Box 1313, Chapel Hill, NC 27514 or by phone at 919-933-9709.

New Breakthrough with Combination CYTOVENE Capsules and Implant

New data presented during a session during the Interscience Conference on Antimicrobial Agents and Chemotherapy in Toronto indicates that combining the Vitrasort implant and CYTOVENE capsules (oral ganciclovir) reduces the incidence of CMV disease in other organs in the body (extraocular disease) and delays the onset of CMV in the unaffected eye (contralateral disease). Patients in the combination arm experienced delayed progression of their CMV retinitis in the implanted eye, compared to those patients treated with the implant alone.

"This study is significant because it demonstrates the best way to treat patients with CMV retinitis is to combine intense local therapy (Vitrasort) with systemic treatment (CYTOVENE capsules)," said Dr. Daniel Martin, principal investigator, Emory University School of Medicine.

Certificate Program Approval Process Established in North Carolina

The Certificate Program Review Committee (CPRC) of North Carolina has approved a set of guidelines which certificate programs in North Carolina must meet. The CPRC committee, an independent body appointed by The North Carolina Center for Pharmaceutical Care (NCCPC), was established to control the quality of certificate programs and assure that minimum standards are met. The criteria for an acceptable Certificate Program were developed by a Task Force appointed by the Deans of the two schools of pharmacy in North Carolina, UNC at Chapel Hill and Campbell University.

In order to obtain approval by the CPRC of North Carolina, a certificate program must: 1) demonstrate a comprehensive educational approach through written program objectives; 2) be presented in a curricular approach; 3) contain an assessment of student competence; and 4) be presented by an ACPE approved provider.

The programs should contain three levels. Level one provides a knowledge base about the disease process and can be presented through self study or lectures. Level two focuses on applying the skills learned. This may be achieved by discussions, interactive workshops, hands-on sessions, or demonstrations. Level one and two combined should total at least 28 hours.

Level three is an experiential component which applies the acquired skills and knowledge to patients. Each participant must demonstrate their abilities on at least one patient and complete one case study demonstrating competency in patient intervention. The student must also submit a paper describing an implementation plan to use what they learned in their practice.

In order for a certificate program to be approved in North Carolina, the sponsor must submit to the CPRC board a program brochure and a completed Certificate Program Approval Request Form at least 60 days prior to the date of the program. The committee evaluates whether or not the program meets the criteria. An approved program can be presented for two years. If a program is denied approval, the CPRC will communicate with the sponsor the reasons and will also provide recommendations regarding changes which would make the program approval.

The granting of the certificates is the responsibility of the program provider. However, any certificate given must include the statement "Approved by the Certificate Program Review Committee of North Carolina." If you would like a copy of the CPRC guidelines or if you would like to submit a request for a certificate program approval, contact NCCPC, P.O. Box 1313, Chapel Hill, NC 27514 or call (919) 933-9709.

New Prophylactic Guidelines for Bacterial Endocarditis

Bacterial Endocarditis, a serious infection of the inner lining of the heart, is most often caused by bacteria infecting the heart valves, hence causing valvular damage. Before the advent of antibiotics, mortality was 100%. Fortunately, improvements in antimicrobial therapy, enhanced ability to diagnose and new prophylaxis guidelines have substantially decreased morbidity and mortality.

Endocarditis usually develops in patients with underlying valvular abnormalities and are thought to be at a higher risk than patients without abnormalities. Although bacteremia is common following many invasive procedures, only certain bacteria are commonly associated with endocarditis. The three most common bacterial pathogens are Streptococcus viridans, Staphylococcus aureus and Entercoccus facalis. As a result, the American Heart Association (AHA) and other national medical organizations have recommended antibiotic prophylaxis to prevent bacterial endocarditis after certain invasive procedures for patients with specific valvular abnormalities.

Currently, there are no randomized or carefully controlled human trials in patients with underlying valvular abnormalities during invasive surgical or dental procedures. Recommendations are based on analyses of relevant literature regarding procedure related endocarditis, experimental animal models and retrospective studies of human endocarditis in terms of antibiotic prophylaxis usage patterns and failures.

AHA guidelines reflect not only prevention of bacterial endocarditis, but also prevention of problems associated with antibiotic use. Although the most recent AHA guidelines are easy to follow, many physicians and dentists do not comply with AHA recommendations. A recent poll among physicians and dentists found an overall compliance rate of 39% for responding dentists and a 27% compliance rate for physicians. The most common prescribing errors include: over and under prescribing, errors in dosage and timing, improper selection of antibiotics, prescribing for low-risk patients or procedures or not prescribing for at-risk patients or procedures.

Antibiotic prophylaxis for at-risk patients is recommended for dental and oral procedures likely to cause bacteremia. Formerly, (AHA) oral prophylactic regimens for non-penicillin allergic patients was Amoxicillin (3g) 1 h before dental appointment, and three tablets 6 h after initial dose for a total of nine tablets. For penicillin allergic patients you could choose between two erythromycin preparations or clindamycin before and after the dental appointment.

The new guidelines for oral/dental procedures now recommend the amoxicillin dose be reduced to 2 g

Situation	Agent	Regimen
Standard general prophylaxis	Amoxicillin	Adults: 2.0 g; children 50mg/kg orally 1 hr before procedure
Unable to take oral medications	Ampicillin	Adults: 2.0 g IM or IV; children 50mg/kg IM or IV within 30 min before procedure
Allergic to penicillin	Clindamycin	Adults : 600 mg; children: 20 mg/kg orally 1 hr before
	Cephalexin	Adults: 2.0 g; children
	Cephadroxil	50mg/kg orally 1 hr before procedure
	Azithromycin or Clarithromycin	Adults: 500 mg; children; 15mg/kg orally 1 hr before procedure

prior a dental procedure, and a follow-up dose is no longer recommended. Moreover, erythromycin is no longer recommended for penicillin-allergic individuals, as clindamycin and other alternatives are now prefered (see chart).

These new guidelines suggest adequate antibiotic concentrations in the serum during and after the procedure. A second dose is not necessary, because serum concentrations are above the minimal inhibitory concentration (MIC) for the infecting pathogens. To reduce the likelihood of microbial resistance, it is imperative that prophylactic antibiotics be used preoperatively, and initiated shortly before the procedure and not continued for an extended period. New recommendations prove to be better tolerated, decrease gastrointestinal adverse effects and may even improve compliance. Practitioners must exercise their own clinical judgment in determining the choice of antibiotics.

Pharmacists hold an array of intervention opportunities in bacterial endocarditis prophylaxis. Determining which patients are at-risk and which patients are not, could decrease inappropriate antibiotic prescribing. In order to adequately recommend therapeutic choices, pharmacists must know how to differentiate between at-risk and low risk patients. Several heart problems require patients to take special precautions, while others have negligible risk, and are at no higher incidence of progressing to bacterial endocarditis than the normal population.

AHA's Recommendations for Antibiotic Prophylactic Treatment

* Patients with prosthetic heart valves
* Patients with a previous history of bacterial endocarditis, and/or congenital heart defects
* Damaged heart valves including (bicuspid, pulmonic and tricuspid valves)
* Hypertrophic cardiomyopathy

Negligible Risk (No Greater Risk than General Population)

* Isolated secundum atrial septal defect
* Surgical repair of atrial septal defect, ventricular septal defect or patent ductus arteriosus
* Previous coronary bypass graft surgery
* Mitral valve prolapse without valvular regurgitation
* Physiologic, functional or innocent heart murmurs
* Previous Kawasaki disease without valvular dysfunction
* Previous rheumatic fever without valvular dysfunction
* Cardiac pacemakers (intravascular and epicardial) and implanted defibrillators

AHA Prophylaxis Procedures

* Dental extractions
* Periodontal procedures including surgery, scaling and root planing, probing
* Dental implant placement and reimplantation of avulsed teeth
* Root canal
* Subgingival placement of antibiotic fibers/strips
* Placement if orthodontic bands but not brackets
* Cleaning of teeth or implants where bleeding is anticipated

Practitioners are often unclear on which type of dental procedures warrant prophylactic considerations for at-risk patients. Pharmacists provide a unique opportunity to interact with the patient, and the practitioner in determining appropriateness of therapy for their procedure as well as, proper selection of antibiotics, regimen length and patient education on the importance of treatment. Also, pharmacists help the patient maintain their disease by explaining any unusual clinical events that may follow the procedure such as unexplained fever, night chills, weakness, myalgia, arthralgia, lethargy or malaise.

Therefore, no set of guidelines can replace the crucial and invaluable role of a pharmacist's clinical judgement. Such professional judgement stems from experiential and circumstantial knowledge that can not always be acheived in written guidelines or recommendations.

Chris Sugg, Pharm.D. Candidate, UNC School of Pharmacy and Tracy Sugg, D.D.S. Candidate, UNC School of Dentistry

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Dear Fellow Pharmacists,

Several problems related to third-party payment plans greatly concern me. I am wondering how those of us practicing pharmacy can best address these issues.

A major concern is the pressure by some plans to ask doctors to change a prescription to a totally different, but cheaper medication in the same therapeutic category. I feel this is not always in the best interest of the patient. My time should be spent attending to my professional duties, not mediating between doctors and insurance companies.

A second issue is the extremely low fee paid by some plans. In some cases, this fee barely covers the cost of materials and does not begin to cover salaries, utilities, equipment and other expenses. Most of the present fees do not reflect my worth as a health professional who is responsible for an integral part of a patient's care. The common fee of $2.25 per prescription is certainly inadequate.

A third major concern is the great amount of time spent processing claims, including time wasted calling doctors who have already written a prescription and do not wish to be asked to do it differently, as well as time wasted solving endless small processing problems. This time should be directed toward properly filling of prescriptions and thoroughly counseling patients.

Furthermore, our legislators are not doing anything to help eliminate the morass created for patients and health care professionals by HMO's and other restrictive insurance plans. The last I heard, these concerns had been tossed to some minor committee in Raleigh and left on the shelf to collect dust.

Can we continue to ignore these affronts to our profession?

Respectfully,

Donald C. Helton, R.Ph.

Pharmacy Practice Act Revisions: The Latest News

The Pharmacy Practice Act Revision was placed into a Study Commission Bill during the '97 Long Session of the General Assembly. This bill along with several other Study Bills was passed by the Senate and House during the last day of the '97 Long Session.

The Senate President Pro-Tem, Senator Marc Basnight, and the House Speaker, Representative Harold Brubaker, will appoint Senate and House members to serve on a Study Committee to address the Practice Act. These appointments will occur during the month of November. The time and date of the initial committee meeting will be scheduled at the discretion of the Chair. The expected time frame of these meetings appears to be November through March, and the number of meetings will be dictated by content. There will be an equal number of members appointed from each chamber totaling eight to ten legislators. It is important that these members be contacted by pharmacists across the state in an effort to assure their understanding of the Practice Act Revision.

The '98 Short Session will convene on May 11, 1998. In the best interest of the Practice Act Revision, we must all be prepared to contact legislators and explain our reasons for moving the Practice Act Revisions into the '98 Short Session. The Association will notify you as soon as the members are named to the Study Committee.

Mike James, R.Ph., NCPhA Legislative Committee Chairman

Code of Ethics- continued from page 11

Section 6

Information given to patients should be adequately explained to allow them to follow the prescribed course of therapy. This information is to assist the patient in the full understanding of the product and expected outcome. If the pharmacist is practicing under the protocol of a physician, appropriate follow-up and documentation should be made. Professional services should be represented to the patient in an accurate manner, with quality and value, at an acceptable cost.

Section 7

As professionals caring for the needs of their patients, Pharmacists should seek fair and reasonable remuneration for their services, both cognitive and distributive. If Pharmacists are asked to participate in transactions that lead to substandard patient care, Pharmacists should refuse to participate. In order to facilitate insurance programs, contracts between third parties and Pharmacists must include means of communication between insurance company Pharmacists and provider Pharmacists to insure that the patient's best interest is served. Pharmacists should never agree to, nor participate in, transactions with other health practitioners under which fees are divided or which may cause financial or other exploitation associated with the rendering of their professional services.

Section 8

Pharmacists should respect and honor the confidential and personal nature of patient-related information and associated professional records; except where the best interest of the patient requires or law demands, they must not disclose any information to anyone without proper authorization within legal guidelines.

Section 9

Pharmacists should be active within professional organizations. They should contribute their time and resources to carry on the work and effort of these organizations to maintain the integrity of the practice of pharmacy.

Potpouri from the NC Board of Pharmacy

Privacy is Important

Common sense would dictate that pharmacists be sensitive to their surroundings when counseling patients. It's often necessary to discuss very private information with patients as part of the patient counseling procedure.

Some locations have set aside private areas for counseling even though it is not required by rule. There is no doubt that patients, as well as pharmacists would be much more receptive to counseling in a private and quiet atmosphere.

Jolt from Foods

Which has more caffeine, Coca-Cola or Tea? Pharmacists are asked such questions but often do not have a good reliable source to use for response. One good reference is Bowes and Church's Food Values of Portions Commonly Used, J.B. Lippincott, 1994. It reveals that 12 ounces of Coca-Cola has 46 milligrams of caffeine, while Pepsi has 38 milligrams for the same quantity. Six ounces of brewed coffee has 103 milligrams, and various forms of cappuccino, vienna, chicory, etc., range down to about 25 milligrams. Black brewed tea has 36 milligrams for six ounces, and instant powdered tea has 31 milligrams per one teaspoonful.

Chocolate also has its share of caffeine with six ounces or semi-sweet chocolate chips containing 105 milligrams of caffeine. The amount of caffeine in other forms of chocolate ranges down to Hershey's Mr. Goodbar which has five milligrams per 1.75 ounce bar.

Quinine Sulfate Labeling

The Food and Drug Administration (FDA) recently issued a final rule requiring drug manufacturers to stop manufacturing and marketing over-the-counter (OTC) quinine sulfate for nocturnal leg muscle cramps. FDA stated the ruling was due to a lack of adequate data to establish a general recognition of safety and effectiveness of quinine for this indication.

As a result of the FDA rule, all OTC quinine sulfate products carrying a label indication for nocturnal leg cramps are now considered misbranded products. Pharmacists providing such products to their patients would be violating both federal and NC law.

Pharmacists may continue to dispense quinine prescriptions for malaria, which remains the only approved indication for the drug. Pharmacists should contact physicians continuing to treat nocturnal leg cramps via prescription, and should inform them that the FDA has published the preceding rule. Decisions concerning quinine therapy should be accurately noted in the patient medication records.

Manufacturers have already started reformulating their OTC leg cramp products that the OTC product they previously used may have the same product name but new therapeutic entities.

Hypodermic Syringes ARE NOT Pediatric Syringes

Two types of syringes are used to administer oral medications: the standard hypodermic syringes without a needle, or syringes specifically designed for oral administration of medication. Both syringe types are supplied with caps that should be remove before the medication is drawn into the syringe or given to the patient.

Trying to administer oral medication through a syringe with the cap in place is potentially life-threatening. This could result from filling the syringe and replacing the cap, or filling a capped syringe. **In both cases, inadvertently attempting to administer medication could blow the cap off the end of the syringe into the patient's throat.**

FDA has received four reports about infants choking on plastic caps from syringes. Reports in the literature also describe syringe cap aspiration.

In response to these events, FDA recommends the following precautions:

- Remove and discard syringe caps before providing syringes that are specifically made for oral medications to patient caregivers.
- Caution caregivers of your patients to discard caps from syringes that they buy OTC.
- Report any problems encountered with syringe caps to FDA's MedWatch (1-800/FDA-1008) program.

The Board of Pharmacy column, a standing feature of the Carolina Journal of Pharmacy, is authored by David R. Work, Executive Director of the NC Board of Pharmacy.

Questions/Suggestions

Do you have an issue or topic you wish to see addressed in the Board of Pharmacy column? If so, send your request to the *Carolina Journal of Pharmacy*, P.O. Box 229, Chapel Hill, NC 27514.

Teat Awarded Commission in the Navy Medical Service Corps

Dr. Daniel W. Teat of the Campbell University School of Pharmacy has been selected for an honorary commission as an officer in the Medical Service Corps of the United States Navy. His commissioning ceremony took place on August 1, 1997 at the Bureau of Medicine and Surgery in Washington, D.C. He was commissioned by Rear Admiral H.E. Philips, Commanding Officer and Director of the Corps.

The Navy Medical Service Corps celebrated it fiftieth anniversary in August and Teat became the fiftieth officer commissioned in this honors program. The last officer to be commissioned in this manner was in 1989.

Dr. Teat currently serves as Assistant Dean for Admissions and an Associate Professor of Pharmacy Practice at the School of Pharmacy. He has been actively involved in recruiting pharmacy officers for the Navy and serving on the faculty of the Naval School for Health Sciences in Portsmouth, Virginia for approximately six years.

He is married and has one son. His wife, Lisa, is a practicing pharmacist and his son, Corey is currently a senior at Cape Fear Christian Acaedemy.

Campbell University Student Report

Campbell University pharmacy students have done much this past year to be proud of::

- winning the national APhA-USP Patient Counseling Competition;
- placing a team among the top ten finalists of the ASHP Clinical Skills competition;
- hosting a record attendance at the ASP Midyear Regional Meeting in Raleigh;
- placing 12 students in competitive summer internship positions with the pharmaceutical industry and U.S. Public Health Service;
- and, winning the first Schweitzer Fellowship for a pharmacy student to perform a summer community health project in North Carolina.

Our students have participated in medical mission efforts over the summer in Ukraine, Moldova and Santa Lucia. Several students were invited to national leadership conferences in Philadelphia and Washington, D.C.

We look forward to blazing new trails in the coming year with the establishment of student chapters of the American Society of Consultant Pharmacists and Academy of Managed Care Pharmacy. This would bring to 12 the total number of student pharmacy organizations at Campbell University, along with two other student organizations supported by our Bachelor's program in the Pharmaceutical Sciences (BSPS)--the international Society of Pharmaceutical Engineers (ISPE) and the American Association of Pharmaceutical Scientists (AAPS).

Rob Farina, Student Executive Board, President, Campbell University Pharm.D. candidate

The UNC School of Pharmacy Builds on Rich Tradition

In March of 1897, the Board of Trustees at the University of North Carolina voted unanimously to establish a school of pharmacy at Chapel Hill and elected E. V. Howell to head the new division. Though pharmacy courses had been taught at UNC since 1880, as part of the School of Medicine and Pharmacy, this gave pharmacy its own identity and its beginning as an integral part of the University.

In September 1897, seventeen students enrolled in a pharmacy program which has since graduated over 7,000 pharmacists, 5600 of whom are still living today. The School has had eight deans, increased faculty and staff from three to 77, and has occupied four different buildings on the UNC campus. The program has grown from two years of education to six years and degrees have changed from PhG to BS Pharm to the current PHARM D. The number of drugs available for study has changed from a few plants to thousands developed and manufactured commercially today.

Though many changes can be noted in the past 100 years, some things remain the same. One of those was best articulated by University President E. A. Alderman in 1897; "The University will give the best instruction in pharmacy. It has a well equipped laboratory...as well equipped as any institution in the South." In addition, the School's mission to provide pharmacists to care for the people of North Carolina has and always will be foundational to our existence.

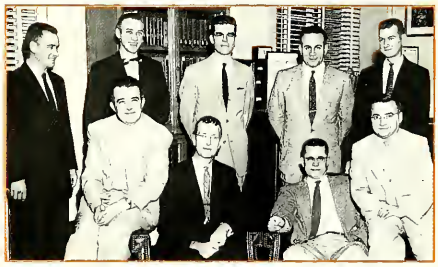
UNC alumni should be proud of the legacy they perpetuate today. Additionally, pharmacists from other institutions have come to North Carolina and augmented our program in their roles as teaching faculty and preceptors to our students. The addition of a pharmacy program at Campbell has not created competition, but has provided opportunities to partner in different aspects of pharmacy education for students as well as practitioners. Alderman's promise of the "best instruction in pharmacy" is not one dimensional, nor is it contained within the walls of Beard Hall. Rather, it is a conglomeration of the best and the brightest in pharmacy committed to creating and maintaining the foremost program in the nation.

Another celebration this year recognizes the Pharmacy Foundation of North Carolina's 50 years of service to the UNC School of Pharmacy. Initiated by a subcommittee of the North Carolina Pharmaceutical Association, this organization began a 16 member committee to solicit and provide scholarships to the students at UNC. Today, 65 scholarships are provided annually, totaling close to $1000,000. In addition, the Foundation provides for professional travel, faculty and staff support, and graduate support through use of $12 million in assets.

The UNC School of Pharmacy has much to be proud of and we hope that everyone who has been a part of our program will celebrate with us in 1997.

Kevin Almond, R.Ph., Assistant Dean, UNC School of Pharmacy

UNC School of Pharmacy Library-early fall, 1947



Faculty of the UNC School of Pharmacy, 1957-58. (Left to right) Seated- Sigurdur Johsson, Edward Brecht, Herman Thompson, Fred Semenuik: Standing- Carl Bauguess, William Taylor, Earl Brown, Calude Piantadosi, and Edward Smith.

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Patient Counseling: Prevention and Treatment of Skin Injuries; Part 1:Basic Concepts and the Itch Response

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Goals. The goals of this lesson are to discuss common dermatologic conditions that are self-treatable with skin protectants, and to present information to use in counseling patients.

Objectives. At the conclusion of this lesson, successful participants should be able to:

1.identify physiologic considerations of the skin and the itch response;

2. identify the causes and etiology of the itch response;

3. exhibit knowledge of the treatment and means to prevent the itch response;

4. show an understanding of the pharmacologic actions and adverse effects associated with skin protectants and other drugs used to treat the itch response; and,

5. demonstrate an ability to counsel patients on the self-medication of minor skin disorders.

A professional development program made possible by an educational grant from

SEARLE

The Skin

The largest and most versatile organ of the body, the skin of an average adult weighs approximately six pounds. It receives about one-third of the circulating blood volume. It also contains a rich network of nerve fibers that are sensitive to stimulation; thus, the skin can be a source of great discomfort when it is irritated.

Skin is elastic and rugged. Under normal conditions, it is self-regenerating.

Skin is constantly exposed to a broad assortment of environmental contaminants and self-applied abuse. It is stretched, scratched, rubbed, squeezed, twisted, gouged, picked, pierced, poked, scraped, soaked, burned, painted, marked, tattooed, sprayed, and shaved. Through it all, the skin generally remains healthy.

The skin consists of two primary layers: the epidermis (outer) and the dermis (lower). These lie directly upon a layer of adipose tissue (the hypodermis, subcutaneous layer) which provides cushioning and pliability, and serves as an effective thermal barrier. The dermis (corium) contains blood and lymph vessels, and nerve fibers. Nutrition is supplied to all layers of the skin through a rich vasculature located within the dermis. Sweat glands and sebaceous glands which open onto the skin's surface project deep into the dermis.

The epidermis is a thin cover composed of five distinct layers. From superficial to deep, these are the stratum corneum (horny layer), stratum lucidum (clear layer), stratum granulosum (granular layer), stratum spinosum (prickly layer), and stratum germinativum (regenerative layer). New epidermal cells constantly replace older cells that are being shed continuously.

The outermost layer, the stratum corneum, consists of flattened, dead (keratinized) cells. Keratin consists of approximately 20 percent water, compared to 70 percent in the stratum germina-tivum. It is this mantle of keratin that normally provides the skin's first line of defense against invasion by microbes and penetration by harmful chemicals. It guards against excessive moisture and electrolyte loss. Keratin also serves as a physical barrier to light and heat.

Skin Protectants

Humans have long applied a wide assortment of topical medicines, prepared extemporaneously and commercially, to protect their skin from damage and prevent or treat irritation. More recently, various FDA panels of experts on OTC external products have evaluated many of these treatments.

The skin protectants listed in Table 1 are considered to be safe and effective for use in self-therapy of the conditions discussed in this, and the next two lessons in this series.

Skin protectants are drugs that guard injured skin or mucous membranes against damage. They safeguard the skin from minor cuts, scrapes and abrasions, burns and sunburns; prevent and protect against chapped,

Table 1
Safe and Effective Skin Protectants

Ingredient	Concentration
allantoin	0.5-2%
aluminum hydroxide gel	0.15-5%
calamine	1-25%
cocoa butter	50-100%
colloidal oatmeal	----
dimethicone	1-30%
glycerin	20-45%
kaolin	4-20%
petrolatum	30-100%
shark liver oil	3%
sodium bicarbonate	1-100%
white petrolatum	30-100%
zinc acetate	0.1-2%
zinc carbonate	0.2-2%

cracked or wind-burned skin and lips; relieve minor irritation and itching of poison ivy, oak and sumac; and dry the oozing or weeping lesions of poison ivy, oak or sumac, and many other skin afflictions.

OTC drug products that contain skin protectants are intended to be applied only to external areas and must be kept out of the eyes. They should not be used on deep or puncture wounds, infected or lacerated skin except when indicated, and only as directed. They may be applied as frequently as necessary, but for periods generally not exceeding seven days unless on the direction and under the supervision of a physician.

The Itch Response

The warm temperatures of summer encourage outdoor activities. As individuals increase their exposure to poisonous plants, sunlight, and biting and stinging insects, they also increase their chance of acquiring a pruritic condition. Pruritus (itching) is the most common complaint of all dermatologic disorders. It is often difficult to treat pharmacologically. Itching can also signal the presence of severe, systemic pathology.

An itch is an irritating cutaneous sensation that evokes the impulse to scratch. Itching must be differentiated clinically from pruritus, although the terms are usually used interchangeably. *Itching* is a symptom. *Pruritus* refers to a condition causing generalized itching in the absence of a primary skin disorder.

There are numerous stimuli and noxious substances which mediate release of peripheral chemicals such as histamine, bradykinin, neurotensin, and substance P, which in turn incite itching. These secondary chemomediators act upon a complex network of nerve endings in the epidermis to incite the itch sensation.

Pain and itching share common stimuli and impulses traverse the same neuronal pathways. These non-myelinated C fibers are distributed throughout the upper regions of the dermis, mucous membranes, and cornea. Even with these similarities, there is still considerable doubt that itching is a modified form of pain even though this has been a long-held belief.

Several important points about itching are relevant to effective patient counseling on its control. The threshold for itching is lower at night, with increased skin temperature, and during periods of psychologic stress. Vasodilation, decreased cutaneous hydration, and a current or previous pruritic dermatosis enhance the itch response.

Itching is often relieved when the primary disorder is treated. This is not always possible. Examples include poison ivy/oak, and reactions following insect bites and stings. Once apparent, the conditions are not altered significantly with OTC therapy. Therefore, treatment of itching is actually the primary therapeutic goal.

Itching over large areas of the body that is generalized and persistent can suggest serious pathology. Specific systemic disorders include atopic diseases, chronic and obstructive renal failure, obstructive hepatic disease, diabetes mellitus, myxedema, gout, lymphoma and leukemia, and polycythemia vera. Pruritus that is not relieved by OTC antipruritic products, or persists beyond seven days, should be treated professionally since this may signal the presence of a serious disorder. Continuing to use a product without seeking professional assistance could delay appropriate treatment.

Treatment of Itching

The first response to itching invariably is scratching. Scratching an itch provides instantaneous, but transient relief. It can also lead to onset of the "itch-scratch cycle" with perpetuation of the unpleasant sensation. Relentless scratching and/or rubbing the area can also cause lichenification (skin thickening with smooth, shiny patches), urticarial papules (solid, red elevations), excoriation (shedding skin) and secondary infection.

Local Anesthetics. Local anesthetics interfere with the generation and transmission of nerve impulses. Benzocaine is often reported to cause sensitivity reactions in susceptible individuals. Most statements relating to the incidence of benzocaine-induced skin reactions are conflicting, and the incidence may be over-estimated. The North American Contact Dermatitis Group study showed that the incidence was five percent in patients with a history of skin disorders. In another study of 1,158 subjects, the incidence of reaction was only 0.17 percent. Patients who are sensitive to contact allergens such as from poison ivy/oak plants and are allergic to other chemicals, should use benzocaine cautiously, if at all.

Antihistamines. Antihistamines block the binding of histamine with its receptors and therefore help control itching. Many systemically administered antihistamines also help protect against non-histamine-induced itching because of their sedative effects.

Their mechanism of topical action is uncertain. It is presumed that at least part is due to blocking histamine receptors, presumably on the nerve endings. But this action cannot account for all therapeutic response. Antihistamines must bind with histamine receptors prior to histamine release to be maximally effective.

Topical application may impart almost immediate relief of itching.

Moreover, there are numerous other chemomediators of itching besides histamine. Since topically applied antihistamines relieve itching, these lines of reasoning imply that a mechanism other than competitive blockade of histamine is responsible for relief of itching. Their benefit is most likely due to local anesthetic blockade of dermal sensory receptors.

Hydrocortisone. The switch of topical hydrocortisone products from prescription-only to OTC status was a significant breakthrough in the treatment of many dermatologic conditions including those which cause itching as a primary symptom. Neither topical hydrocortisone nor the stronger halogenated steroids reduce severe inflammation already formed. Used early in therapy, however, OTC products containing hydrocortisone will help reduce additional inflammation following the initial response.

Hydrocortisone has received widest recognition and the most extensive use in therapy of inflammatory dermatoses. It is the benchmark against which safety and effectiveness of new corticosteroids are measured. Tests that compare the relative potency of various corticosteroids traditionally rank hydrocortisone as a low-potency steroid when used for antiinflammatory effect. At the same time, hydrocortisone ranks high on safety. These facets make it ideal for self-administration.

Hydrocortisone constricts cutaneous blood vessels to prevent mobilization of polymorphonuclear leukocytes and monocytes into the area. It also antagonizes the inflammatory response of mast cells and others that release mediators of inflammation. Some authorities claim that vasoconstriction is not a consistent component of hydrocortisone's action and respond that they discern it in fewer than 10 percent of subjects tested.

OTC topical hydrocortisone products provide a safe and effective means for temporary relief of minor skin irritation including dermatitis. Nonetheless, several points need to be emphasized to maximize benefit and minimize the chance for adverse effects.

The patient should be advised to apply a thin film and massage it thoroughly into the skin, three to four times a day. Product labels warn against continued use for longer than seven days without physician supervision. If the condition does not clear by then, it may require specialist intervention. Moreover, the potential for systemic adverse effects following chronic self-therapy warrants this limitation.

Hydrocortisone products should not be used in children under two years of age. Young children are more susceptible to adverse effects should absorption occur through the skin. Absorption is increased with severely inflamed dermatitis, and infants have not yet fully developed complete dermal layers.

Cream dosage forms are commonly used because of favorable patient acceptance. They are non-greasy, rub in easily, and do not leave a residue. Creams are appropriate for nearly all approved indications and can be applied to any area of the body. Lotions are best for chafed areas, and for the scalp or other hairy areas because they spread easily. Ointments are preferred for dry, scaly lesions since they are emollient and retain moisture on the skin.

Patients should be advised to follow directions carefully and not exceed the recommended dosage. They should be made aware that antipruritic activity may require a day or two to onset. Topical use of hydrocortisone in OTC products is not associated with toxicity even on abraded skin when used as directed.

Increasing dermal humidity by use of an occlusive covering may enhance drug penetration 10-fold. Clothing and the vehicle may also occlude the skin and enhance absorption. However, unless instructed otherwise, the area should not be occluded.

Counterirritants. In low concentrations, counterirritants (camphor, menthol, phenol) depress the skin's pain/itch receptors by causing mild, localized irritation at other sites. Their exact antipruritic mechanism is not known. A portion of counterirritant therapy may be placebo, the user deriving benefit from the characteristic "medicinal" odors. Counterirritants are safe when used as directed, and may be relied on for antipruritic activity.

Wet Dressings. One of the often overlooked means to help control itching and reduce excessively dry skin which is causing the itching is with a wet dressing. In simplest form, the process involves soaking a piece of finely woven cloth or cotton in cold water, saline or sodium bicarbonate solution, wringing it slightly so as not to drip, then applying it to the skin. As the solution evaporates, it imparts a cooling (antipruritic) sensation. The cloth should not be more than a layer or two thick to maximize evaporation. It should be remoistened every 10 to 15 minutes and reapplied two to three times. The process should be repeated several times a day as needed.

For persistent itching or when vesiculation is especially severe, aluminum acetate (Burow's solution) in a 1:40 (2.5 percent) to 1:20 (5 percent) concentration is a safe and effective wetting agent. Domeboro tablets are a commercial formulation that, when dissolved in water, makes Burow's solution. Applied as instructed, it coagulates bacterial and serum protein, and is an effective antipruritic agent.

Wet dressings also have an additional benefit of causing gentle debridement and cleansing of the skin. The cloth must not be allowed to dry on the skin since it can adhere to it. When removed, it then increases the debriding action and causes greater skin damage with resultant exacerbated itching.

Auxiliary Measures. Itching is stimulated by a number of factors. Rough clothing, especially woolen, should not be worn over the affected area. Use of strong soaps or detergents should be minimized, especially those that are highly fragrant. Prolonged soaking in bath water should be avoided, and bath salts and bubble bath

Table 2
Patient Information on the Correct Use of Products to Relieve Itching

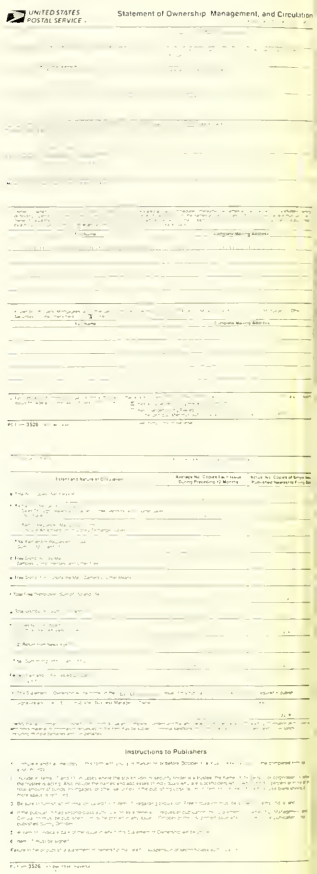
- This product is for the temporary relief of itching associated with minor skin irritation.
- This product is for external use only. Do not use it near your eyes. If you accidentally swallow some of a liquid product, contact a doctor or poison control center right away.
- Follow the instructions listed on the label of this product.
- Do not use this product on children under two years of age, except on the advice and under the supervision of a doctor.
- If you are going to use an aerosol or pump spray product on your face, apply it on your hand or a piece of gauze or pledget of cotton before applying to your face.
- If itching is not relieved, if it persists longer than seven days or worsens, or if your skin becomes red, irritated, or inflamed while using this product, see a doctor for further advice.
- Keep this and all other medicines out of the reach of children.

For local anesthetics:

- Before you use a local anesthetic, check with your doctor or pharmacist if you have ever had any unusual or allergic reaction to this medicine or other local anesthetic, especially when applied to the skin or other areas of the body.
- Do not apply this product more often than three to four times a day, over extensive areas, or on raw, blistered or damaged skin.

Other helpful information:

- Keep your fingernails trimmed short, and edges filed smooth, to prevent damage from scratching. It is best to avoid excessive scratching.
- Do not wear rough or woolen clothing over an area that itches. Use a bed sheet between you and your bed covers.
- Try to avoid unnecessary tasks or situations that make you nervous or cause stress. These can worsen your itching.
- During the summer months, run your air conditioner on a low setting, or turn the compressor off occasionally, to keep your skin from becoming excessively dry.
- Following bathing, pat the area of your skin that itches, dry; do not rub it with a towel. Then, apply a thin layer of a moisturizing or protective skin care product.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products should not be used. When emerging from a bath or shower, the individual should apply an occlusive skin protection product to the affected area. Fingernails should be kept trimmed short and edges filed smooth to prevent skin damage from scratching. Anxiety and stress should be avoided.

Brief cool baths constrict vessels and often soothe pruritus. Warm baths incite vasodilation and increase itching. This can nullify benefit from OTC products. Bathing is beneficial when itching occurs over an area too large to cover with a wet dressing. Soaking should not last longer than 10 to 20 minutes.

Counseling Patients

The best treatment for itching is to avoid contact with the offending cause. Persons who are at risk can begin antihistamine therapy a day or two in advance of the event (if they are not allergic to it). Alternatively, a liquid or chewable tablet form of an antihistamine, rather than solid dosage forms, should be used immediately after an insect bite or sting, or encounter with a poison ivy/oak plant. These will provide quick access of the drug to the blood and, hence, block histamine receptors more quickly than the other forms of the drug.

Patients should be strongly advised to limit scratching and rubbing their skin. More counseling information is provided in Table 2.

Continuing Education Quiz

Patient Counseling: Prevention and Treatment of Skin Injuries: Part 1

Please circle the correct answer. For information on how to submit this quiz for continuing education credity see the directions below.

1. The outermost layer of skin is the:
   a. epidermis.
   b. corium.
   c. endodermis.
   d. dermis.

2. All of the following are safe and effective OTC skin protectants EXCEPT:
   a. cocoa butter.
   b. shark liver oil.
   c. colloidal oatmeal.
   d. sodium chloride.

3. Which of the following enhances the itch response?
   a. Decreased skin temperature
   b. Increased cutaneous hydration
   c. Psychologic stress
   d. Vasoconstriction

4. The mechanism of action of topically applied anti histamines in relieving itching is most likely:
   a. central nervous system blockade.
   b. local anesthetic blockade.
   c. prostaglandin inhibition.
   d. vasocontriction of subcutaneous blood vessels.

5. When counseling patients on the use of wet dress ings to alleviate itching, it is important to relate the follo wing.
   a. Leave dressing on for at least one hour.
   b. Cover the dressing with adhesive tape.
   c. Allow the dressing to dry on the skin.
   d. Use cold water, saline, or a sodium bicar bonate solution.

6. All of the following depress the skin's pain/itch re ceptors by causing mild localized irritation at other sites EXCEPT:
   a. menthol.
   b. benzocaine.
   c. camphor.
   d. phenol.

7. All of the following incite itching EXCEPT:
   a. bradykinin.
   b. histamine.
   c. norepinephrine.
   d. substance P.

8. All of the following are true statements about OTC topical hydrocortisone products EXCEPT:
   a. they can be used indefinitely without medical supervision as long as there are no signs of infection.
   b. ointments are preferred for dry, scaly le- sions since they are emollient and retain moisture on the skin.
   c. their antipruritic activity may require a day or two before being noticed.
   d. they are safe and effective with no proof of systemic effects when used accord ing to FDA- approved directions.

9. The stratum corneum consists mainly of:
   a. blood vessels.
   b. keratin.
   c. germinating cells.
   d. water.

10. The regenerative layer of skin is the stratum:
    a. corneum.
    b. lucidum.
    c. germinativum.
    d. granulosum.

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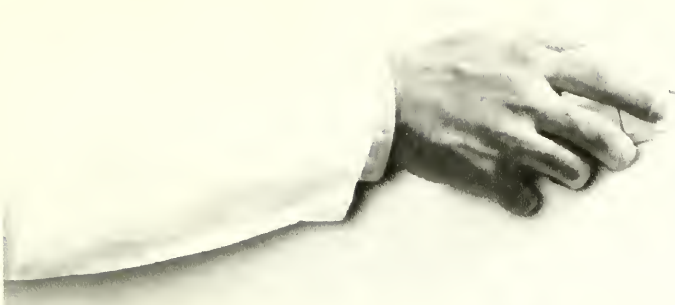

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CAROLINA JOURNAL OF PHARMACY

Volume 77, Number 6 November/December 1997

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CONTENTS

ADVERTISERS

The *Carolina Journal of Pharmacy* (ISSN 0528-1725) is the official journal of the North Carolina Pharmaceutical Association, published bi-monthly at 109 Church Street, Chapel Hill, NC 27516. The Journal is provided to NCPhA members through allocation of annual dues. Subscription rate to non-pharmacists is $25.00 (continental U.S.). Overseas rates on request. Second class postage paid at Chapel Hill, NC. All opinions expressed in the *Carolina Journal of Pharmacy* are not necessarily official positions or policies of the association. Publication of an advertisement does not represent an endorsement.

Fred Eckel, MS
Executive Director

Executive Director's Perspective

North Carolina Pharmacy is on the March

It has always been true that pharmacy's future is in the hands of pharmacists. But it is rare for a number of events to coincide sufficiently to make change easier and more purposeful. North Carolina has an opportunity to take a giant step into the future. Now, more than any other time during my 37 years in pharmacy, no area of pharmacy is secure with its own future. We need each other and a unified voice to insure a bright future for ourselves and our students. Holding on to the past will not work. Each pharmacist will need to change how they approach practice, and believe in the changes they are making, if they want to advance into the 21st century.

Pharmaceutical Care must become the focus of our practice; patient or case management, a better term than disease management must be our goal. Helping people make the best use of their medications is why we exist and is the purpose of our patient drug management activities. Although monitoring economic outcomes is an essential component in today's managed care system, we must never lose site of improving the quality of lives for our patients. As a profession, we should be proud of our contributions to our country's health care, but today we face the formidable challenge of playing a much greater role in patient care. We must capitalize on our good reputation of being the most trustworthy professional, as indicated in the last eight gallop polls, and reposition our profession as pharmaceutical care providers.

The NC Center for Pharmaceutical Care is focused on making this effort a reality for NC Pharmacy. The North Carolina Pharmaceutical Association is also committed to this task. The mission statement for NCPhA reflects our intention as it states, "The mission for Pharmacy is to serve the public as the profession responsible for providing pharmaceutical care–the application of a pharmacist's skills and knowledge in the use of medications, medical devices and related products, and in the provision of services extended on the patient's behalf to acheive optimal therapeutic outcomes." Our state pharmacy organizations are working to change pharmacy practice. Although we are all trying to accomplish the same outcome, we appear fragmented as a profession.

While our goals are similar and our resources are limited, should we look at a better way to organize NC pharmacy? I think we should.

Each special area of pharmacy practice must be successful for our profession to be successful. Therefore we need each other more than ever. One way to secure our collective future is through organizational continuity. We must be willing to "break-set" as the psychologist says by "thinking out of the box" for this to happen. NCPhA wants to take the leadership in the transformation of NC Pharmacy's organizational structure. Included in this journal issue on page seven is NCPhA's proposal to address the imminent needs of our profession through careful examination of organizational restructuring.

Nevertheless, we can not put NCPhA activities on hold while we study reorganization. We are presently working on your behalf to keep the Medicaid Program from inappropriately cutting pharmacy payment fees. We are also promoting passage of the revised pharmacy practice act. We need your membership and support to make our efforts effective.

Our staff is now complete and we are delighted that we can now serve our members better and support the advancement of NC Pharmacy. I am proud to introduce our staff to you on the accompanying page. Let us know how we can help. I look forward to proving to you that you need NCPhA too.

With the Annual Convention approaching, our staff and Convention Committee are busy planning our upcoming convention. This year's convention will be May 28-31, 1998 at the Omni Europa Hotel in Chapel Hill, NC. We have changed our format this year to provide you with a better program. Both our Executive Committee and our Convention Committee elected to place emphasis on quality continuing education programing, while maintaining some light hearted fun. The meeting proper will begin on May 29 and will focus on the impact of integration and consolidation in the health care arena that morning. We are trying to arrange representation on a national and state level in order to present both perspectives.

The afternoon session will change gears to address women's health issues, including the promotion of wellness and disease specific programming such as breast cancer. The following day will begin with a new drug update followed by workshops. After some afternoon free time, we will close the day with a banquet.

We are still planning to have our traditional golf and tennis tournaments. Benny Ridout and Joe Whitehead have volunteered to head up the golf outing. The Woman's Auxillary is also diligently working on their programs as well. Other exciting events will be interspersed throughout the convention to ensure a hint of laughter and comrodary.

We are looking forward to this year's convention and hope to see you there. We are expecting a good turnout this year.

Staff Profiles

Teressa Reavis joined the Association staff this past September. She is currently attending Alamance Community College seeking a degree in Information Systems.

As Director of Membership Services, Teressa maintains the membership database of ~2,000 members and helps out with Continuing Education.

Teressa is a single mom of three girls, ages 10, 12 and 14. She enjoys the beach, waterskiing and camping.

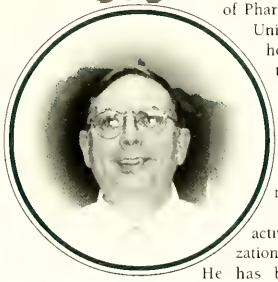
Jennifer Stamer, Associate Executive Director, has been with the Association since May of 1996. One of her goals, both short term and long term, is to make improvements to member benefits. The Journal was the focus of most of her energies this last year.

This Spring, Jennifer intends to visit local pharmaceutical associations to establish strong networks and continuity between the the Association and its local constituents.

Although Cathy Jordan, Administrative Assistant for NCSHP, does not directly work for the Association, she works closely with NCPhA staff. Her employment began in November of 1993 as a shared position with the NCPhA and the NCSHP. She worked for both groups until April of 1996. After a 3 month absence, she resumed working solely for NCSHP. Cathy graduated from Alamance Community College in August of 1994 after attending night school for three years.

Amy Goss is the new Financial Manager for the Association. She graduated from the University of North Carolina at Chapel Hill with an accounting degree.

She and her husband just returned from Japan as her husband had an assignment with IBM. Amy has two children and lives in Chapel Hill, NC.



Fred Eckel, Acting Executive Director, has been an ardent advocate of Pharmacy for 37 years. He began his career in 1963 as Assistant Director of Pharmacy at The Ohio State University Hospital. In 1966 he moved to NC as instructor at the University of North Carolina at Chapel Hill and head of the Plan of Pharmacy Assistance. Today Fred is a Professor of Hospital Pharmacy at UNC-CH.

Fred has also been active in pharmacy organizations throughout his career. He has been the Executive Secretaty of NCSHP since 1977 and is also the Executive Director of NCCPC.

In November, Rhonda Horner Davis joined the Association staff as Office Manager. Her responsibilities include keeping all supplies and materials in stock while providing clerical support. She also handles the professional liability program

Rhonda is married and has a new 5 month old baby. She enjoys Nascar, spending time with her family and watching her baby grow.

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Reorganizing Pharmacy Organizations

NCPhA President Jimmy Jackson has formed a Task Force on Pharmacy Reorganization, with the charge to look at ways in which North Carolina pharmacy can be organized to achieve maximum effect. He has asked me to Chair this effort, and has named Debbie Wren, Ginger Lockamy, Frank Burton, Tim Giddens, Tim White, Ross Brickley, Jeff Peterson, Jennifer Burch and Ralph Raasch as the members of the Task Force. Additional members may be added for complete representation. In this report I would like to provide NCPhA membership with a brief background of the Task Force plans and perspective.

Background. If the founders of NCPhA were still living, they would doubtless be surprised and disappointed at our current state of affairs. A historical marker stands today on the grounds of the North Carolina General Assembly in Raleigh, marking:

> ...the efforts of "nearly 100 North Carolina pharmacists who gathered together in the senate chamber in the Capitol in Raleigh on August 11, 1880" to enact legislation establishing pharmacy as a profession in North Carolina.

This group formed the North Carolina Pharmaceutical Association. The organization at once sought and secured the passage of an act by the General Assemble of 1881 which included a provision requiring that all pharmacists be licensed by a board that would examine the candidate's fitness for the work.[1]

It is not an overstatement to say the pharmacy profession in North Carolina was founded through the efforts of one group of pharmacists working together in one organization. Unfortunately this original solidarity within the profession has been eroded through the organizations representing community pharmacy (National Community Pharmacy Association), health systems pharmacy (American Society of Health-Systems Pharmacists), consulting pharmacy (American Society of Consulting Pharmacists), managed care pharmacy (Association of Managed Care Pharmacy), an "umbrella organization" representing all areas of pharmacy practice (American Association of Colleges of Pharmacy), and many other areas of practice. Moreover, each of these national organizations has a state chapter, and in many cases a student chapter at each of the 80 schools of pharmacy in the U.S. If shortages exist in some area of pharmacy, it is definitely not in the area of organizations!

Each of these organization arose out of an effort to support the unique need of pharmacists in specialized areas of practice. Indeed, many of these organizations started out as "interest groups" within the parent organization (at the national level this was usually the American Pharmaceutical Association). Over time, as the interest groups became larger, as they experienced different needs, and as they developed a need for separate identity, they split off and became separate organizations.

The reasons for this proliferation of pharmacy organizations are clear, but unfortunately so are the undesirable consequences. North Carolina pharmacists once raised their voices in harmony and achieved remarkable accomplishments in Raleigh and elsewhere. Today the voices of pharmacists are less harmonious, more discordant, and with a resulting reduction in effect. With the profession speaking separately through many different groups, it is not surprising that our message is sometimes confusing to the listener. Some examples during the past several years have included efforts to revise the practice act, provide Board authority for regulating technicians, limit the restrictions of managed care on pharmacists scope of practice, and regulate dispensing by out-of-state and non-pharmacist groups. It would be an oversimplification to say that all these problems would disappear if pharmacy could speak with a unified voice. On the other hand it is undoubtedly true that our position would be strengthened if we could have a unified position.

Present and Future. Various changes are in the wind at the state and national level. Some states (e.g., Indiana, Wisconsin, Michigan) have consolidated the various state organizations into a single pharmacy organization, reflecting the model of our North Carolina

founders in 1880. There is also developing at the national level a recognition that financial realities, and grassroots membership demands, require organizations to explore consolidation of effort. In North Carolina that recognition has been stimulated by the concurrent, and unexpected, situation of vacancies in the Executive Director position of NCPhA and NCSHP. As many people know, Mr. Al Mebane announced his retirement from the NCPhA Executive Director position effective November 1, 1997, and Ms. Frances Gualtieri resigned as Executive Director of NCSHP effective July 31, 1997. Thus, we have an unusual opportunity to consider a new, consolidated structure for pharmacy organization in North Carolina.

In responding to President Jackson's charge, the Task Force intends to complete the following information gathering steps:

1. Survey other states to determine whether, and how, they have moved to a consolidated structure for pharm- organizations.

2. Invite comments from NCPhA members, as well as all other North Carolina pharmacists on ways to achieve the goal of a unified voice for pharmacy in North Carolina.

3. Develop a proposal that would allow us to move toward a unified voice for pharmacy, while retaining essential support for specialty areas in pharmacy.

It is our intent to complete our work in time for the annual Pharmacy Leaders Retreat in February, 1998. At that two-day retreat, where the elected and appointed leaders of all North Carolina pharmacy organizations are in attendance, we hope to develop a consolidated structure for pharmacy. At this point we do not know what that structure should be, and we have no preconceived notions on what should be included or excluded. Our interests and motives are exactly the same as those nearly 100 pharmacists who went to Raleigh in 1880 and created the profession of pharmacy in North Carolina. Our task in 1997 is, however, substantially more difficult due to 117 years of history. On behalf of the Task Force let me close by inviting all NCPhA members to submit ideas, comments or suggestions that can help us in this important task.

References

1 Alice Noble, "The School of Pharmacy of the University of North Carolina: a history." The University of North Carolina Press, 1961.

William H. Campbell, PhD, Dean, University of North Carolina School of Pharmacy

NC Pharmacy Medicaid Program

President Jackson and Lobbyist Mike James have been promoting the value of pharmacist participation in the NC Medicaid Drug Program during the last several months. North Carolina is anticipating the continuing evaluation of the Medicaid program since cost may exceed the budget available by as much as 20% next year. Although we tried to make the case that the drug program is very cost effective and there are many studies to support this, every component was examined for possible fee reductions including pharmacy.

After Mike and Jimmy's discussions, the Division of Medical Assistance called a meeting of pharmacists and physicians at which NCPhA was well represented to explore options. The pharmacists expressed the importance of the Medicaid program to them and that it made good sense as both tax paying citizens as well as concerned professionals to promote the use of less costly therapies through education and collaboration with physicians as the best way to save the most money long term. We think we have the support from the Division of Medical Assistance to take this approach rather than a fee reduction. It means that NC pharmacists will need to accept responsibility, often working collaboratively with the prescriber to use less expensive therapy where appropriate, discontinue drugs that are no longer needed, encourage non-drug alternatives where appropriate, and other measures to insure the cost-effective use of medications in the Medicaid program. We assured the staff that pharmacists will do their part. We hope we will not have to take any stronger action to keep the pharmacy fee from being cut.

Health Care Oversight Committee Named

The Health Care Oversight Committee (HCOC), the committee that will hear the Pharmacy Practice Act Revisions, has been appointed. We strongly encourage you to contact these legislators. The members are as follows:

House of Representatives

Joni Bowie
106 Nut Bush Road East
Greensboro NC 27410
H 910 294-2587
W 919 733-5853

Lanier Cansler
14 Laurel Summit
Asheville NC 28803
H 704 298-8514
W 919 715-3007

Debbie Clary
105-D02 North Shore Court
Cherryville NC 28021
H 704 980-1407
W 919 715-3011

Jim Crawford
509 College Street
Oxford NC 27565
H 919 693-6119
W 919 733-5826

Theresa Esposito
207 Stanaford Road
Winston-Salem NC 27104
H 919 765-5176
W 919 715-2530

Edd Nye
PO Box 8
Elizabethtown NC 28337
H 910 862-3679
W 919 733-5477

Thomas Wright
317 S. 17th Street
Wilmington NC 28401
H 910 343-9842
W 919 733-5754

Senate

Jim Forrester
PO Box 459
Stanley NC 28164
H 704 263-8603
W 919 733-5708

Wib Gulley
4803 Montvale Drive
Durham NC 27705
H 919 419-4447
W 919 715-3036

Fletcher Hartsell
129 Overbrook Drive, NE
Concord NC 28025
H 704 786-8508
W 919 733-7223

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211 Wilson Point Road
New Bern NC 28562
H 919 633-2670
W 919 733-2055

Tony Rand
121 Great Oaks
Fayetteville NC 28303
H 910 864-0550
W 919 733-9892

Bob Rucho
400 Trafalgar Place
Matthews NC 28105
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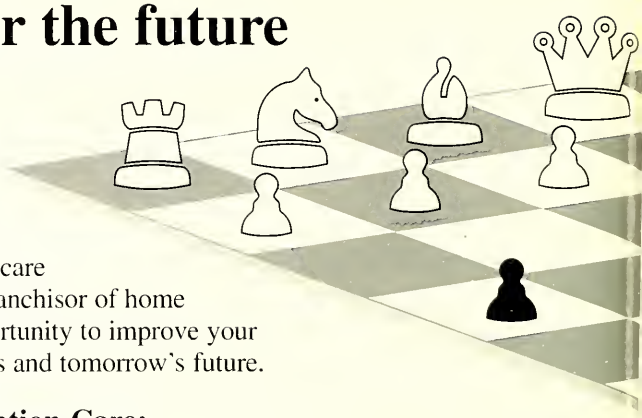

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Glisson and Lockamy Recognized Among Nation's 50 Most Influential Pharmacists

Al Lockamy, Staff Pharmacist, CVS, Cary, NC and Gary Glisson, Owner, Ward Drug, Nashville NC were featured in the October 1997 issue of the *American Druggist* as two of the top 50 pharmacists who have helped "advance the profession's patient-care role." Both NC pharmacists also play critical roles in educating and influencing students as preceptors of both Campbell University and UNC-Chapel Hill Schools of Pharmacy. While Lockamy's students are participating in the Med-Pharm Link program – a program intertwined with medical students, Glisson's mentees get the unique opportunity of being exposed to a pharmacist care practice model. In particular, Glisson's pharmacy offers an extensive diabetes program including monthly support group sessions.

Have You Been Paid for Non-dispensing Services?

NCPhA is attempting to track billing submissions which have been paid for non-dispensing services. If you have been paid for such services, please send copies of the billing to Fred Eckel at NCPhA. Please notify him via e-mail FRED_ECKEL@UNC.EDU indicating 1) which company(ies) have paid and 2) what paperwork was submitted with the billing (HCFA 1500, NCPA PCCF, medical necessity form, etc.). As data is collected which gives a clear picture of what's happening, NCPhA can communicate back to its membership what's working and what isn't.

Socioeconomic Seminar – March 18, 1998

This year the NCPhA and the UNC School of Pharmacy's Socioeconomic Seminar will be held in Greensboro at the Koury Convention Center on March 18th. Ken Otis, President of BCBS of North Carolina will be one of our keynote speakers as he addresses the future health care payment system including reimbursement for pharmacist cognitive services. At least six workshops conducted by our own NC pharmacists who are getting paid for cognitive (pharmaceutical care) services will be offered. You can select the two of most interest to you. There is much happening in the legislative and regulatory arena in pharmacy. Dave Work and others will bring you up to date on these happenings to close out the program. We hope to see you there.

NCPA Elects W. Whitaker Moose as President-elect

The National Community Pharmacists Association (NCPA) installed W. Whitaker (Whit) Moose, P.D., Mount Pleasant, NC as President-elect at its 99th Annual Convention and Trade Expostion held October 25-29, 1997 in Denver, Colorado

Whit is the owner of Moose Pharmacy, a 115 year-old pharmacy, in Mount Pleasant, NC and is a 1960 graduate of the University of North Carolina School of Pharmacy.

New BPH Treatment Can Be Used Safely with Common Blood Pressure Medications

FLOMAX, (tamsulosin HCl) Capsules, the new alpha blocker for benign prostatic hyperplasia (BPH), can be safely added to certain common antihypertensive agents, according to three new studies published in *Clinical Therapeutics*.

The studies found that coadministration of FLOMAX had no clinically significant effects on the pharmacodynamic action of nifedipine, enalapril or atenolol; produced no clinically significant differences in pulse rate and blood pressure, including after first dose; and did not cause increased side effects.

The older alpha blockers were originally developed to lower blood pressure. FLOMAX is an alpha blocker developed specifically for BPH. FLOMAX is not indicated for hypertension.

North Carolina School Boards Association Elects Jack Watts as President

The North Carolina School Boards Association (NCSBA) elected new officers during its 28th Annual Conference held November 17-19.

Jack Watts, chair of the Alamance-Burlington Board of Education, was elected president. Originally from Tabor City, Mr. Watts has been a school board member for 28 years. He is currently the chairman of NCSBA's Goals & Directions Committee. Mr. Watts believes each child should be offered an equal education of excellence, one which will prepare all students for the next century.

Novopharm Makes Wilson, NC Home

Leslie Dan, CEO, Novopharm

In Novopharm officially opened the doors at their new $38 million production facility in Wilson County on November 14, 1997. Grand Opening ceremonies included guided tours of the 250,000 square foot state-of-the-art facility, a luncheon with Governor Jim Hunt, and a quarter of a million dollar donation to promote science education in North Carolina. During the ceremonies, Novopharm solidified their commitment to North Carolina by announcing the establishments of the Novopharm Scholastic Science Fund, designed to contribute $250,000 over the next ten years to support and encourage students to pursue a career in pharmacy or science.

Novopharm Pledges Investment in Education, Sciences

"I personally know the value of education and where it can take you in life and that's why Novopharm established the Novopharm Scholastic Science Fund. It's proof of our commitment to invest in this state and in the people of North Carolina—especially the students," said Leslie L. Dan, chairman and chief executive officer of Novopharm Limited, in his address to those attending the facility's Grand Opening. "I truly believe that the future of pharmacy and science is in the hands of today's students.They will be the ones who will discover tomorrow's breakthrough treatments," said Mr. Dan, who holds advanced degrees.

The Novopharm Scholastic Science Fund will support science education through a yearly grant of $25,000 for the next 10 years, funding programs within Wilson County and throughout the state from elementary schools through the University levels. In addition, a long-term goal of the Fund is to build enrollment in North Carolina's two Schools of Pharmacy—Campbell University and the University of North Carolina. The Fund will be governed by a Board of Directors comprised of state and local community educators—from school administrators and faculty members at various levels—to Wilson County education leaders, members of the Governor's Smart Start Program and Novopharm executives. Each year, the Board of Directors will evaluate requests for funding and select grant recipients.

Art Contest with 3rd Graders Highlights Role of Community Pharmacists

During Grand Opening ceremonies, winners from a third-grade art contest held with students in middle schools throughout Wilson County were announced. The contest, sponsored by Novopharm and the Wilson Education Partnership Program, was designed to highlight the important role local pharmacists play in the healthcare of their community. Students were asked to draw pictures of their local pharmacists. The drawings will be on display at Novopharm.

Governor Hunt, in Wilson for the Grand Opening ceremonies, praised Novopharm for its commitment to education in the areas of pharmaceutical sciences and healthcare. North Carolina is raising standards for students and teachers and holding them accountable—strengthening our ability to continue recruiting good companies like Novopharm," Hunt said. Novopharm's similar commitment to education will ensure brighter future for North Carolina and our children, and I am grateful for their investment in our state."

Novopharm, one of the most visible generic drug makers in the U.S., will produce more than 10 prescription products at the Wilson facility. Novopharm has already hired 50 local employees and plans to hire up to 100 more once the plant is in full operation in 1998. The new Novopharm facility will have the ability to produce more than 12 billion tablets and capsules per year when operating at its maximum production capacity. In addition to production, the Novopharm facility also includes a state-of-the-art laboratory for testing and quality assurance.

New Demand for Generic Drugs Shines Spotlight on Novopharm in NC

Despite North Carolina's status as home-

base to several branded pharmaceutical companies, the use of generic drugs throughout the U.S. has skyrocketed as consumers continue to demand lower cost medicines and more affordable healthcare options. According to reports by IMS America, a pharmaceutical industry marketing analysis group, in 1997 alone, more than twenty brand name drugs totaling almost $4 billion in sales will become open to generic competition—the highest amount ever ($1 billion in 1995; $1.8 billion in 1996). And, over the next five years, brand name drugs totaling almost $14 billion in sales will lose patent protection, giving consumers increased access to lower cost generic drugs.

Novopharm Begins National Campaign to Educate Consumers on Generics

On the heels of launching a generic version of the popular anti-ulcer drug Zantac (ranitidine hydrochlorine), one of the best selling prescription medications in the world, Novopharm launched a national awareness campaign to educate consumers on the safety, efficacy, and cost savings facts about generic drugs. The campaign includes a free consumer brochure—produced in conjunction with the National Association of Chain Drug Stores (NACDS)—and is available through a toll-free number (800) 635-5067. The brochures are also available at chain pharmacies throughout the U.S. In addition to the brochure, an educational video featuring former U.S. Surgeon General Dr. Jocelyn Elders was produced, which answers some of the most frequently asked questions about generic drugs.

Typically, a pharmaceutical company receives a 17-year patent on a new prescription drug, which provides exclusive marketing rights for the duration of that period. As the end of the 17-year patent life approaches, generic companies can then file an Abbreviated New Drug Application (ANDA) with the Food and Drug Administration (FDA) seeking approval to market the generic equivalent when the patent expires. When a generic drug becomes available, they are usually priced at 30 to 50 percent less than the branded version.

Novopharm currently has over 30 ANDA's approved by the FDA and has an equal number presently under review by the Office of Generic Drugs at the agency.

Novopharm Limited, based in Scarborough, Ontario, is a privately held Canadian-based global pharmaceutical company. Novopharm has 13 divisions and subsidiaries which specialize in the development and manufacture of generic and over-the-counter pharmaceuticals as well as leading-edge innovative research into treatments for cancer and HIV.

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Vice Pres., Larry Irwin, 411 Hawthorn Rd., Elkin 28621, (910)835-6627
Treas., Jim Worley, 216 Gaddy's Ridge Rd., Wilkesboro 28697, (910)838-7356
Sec., Lois Koontz, P.O. Box 1205, Jefferson, 28640

Cape Fear Pharmaceutical Society
President, Martha Epps, 4404 Owen Dr., Fayetteville, 28304, (910)483-4050
Vice Pres.,Linda Leviton, 811 Stamper Rd., Fayetteville, 28303, (910)484-3444
Sec.-Treas., James Smith, 202 W. Broad St., St. Pauls, 28384, (910)865-4134

Catawba Valley Society of Pharmacists
President, Mike Long, 101 Everett Dr., Granite Falls, 28630, (704)396-3063
Vice Pres., Louis Holder, 575 19th Avenue Dr. NW, Hickory, 28601,(704)324-8664
Sec., Bill Means, 649 5th St. NW, Hickory 28601, (704)322-7719
Treas., Don Johnson, 1021 13th Ave. NW, Hickory 28601, (704) 322-7717

Cleveland County Pharmaceutical Association
Contact Person: Fern Douglas Potts, 330 Tremont Place, Shelby, 28150, (704)487-0235

Columbus-Bladen County Pharmaceutical Association
President, John Watson, 204 Anderson Street, Tabor City, 28463, (910)642-3106
Vice Pres., Sterling Koonce, 7 Pireway Rd., Tabor City, 28463, (910) 653-4800
Sec.-Treas., Mary Hooks, 1301 Miler Circle, Whiteville, 28472, (910)642-2250

Crystal Coast Pharmaceutical Association
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Davidson County Pharmaceutical Association
President, Robert E. Guy, 1583 Clodfelter Rd., Winston-Salem, 27107, (910)476-5632
Vice Pres., Donna Rivenbark, 600 Dorado Circle, High Point, 27265, (910)882-4308
Treas., Seth Miller, 412 Arbor Dr., Lexington, 27292, (704)246-5255
Sec., David Fleming, 703 E. Sunrise Ave., Thomasville, 27360, (919) 475-1888

Down East Pharmacy Society
President, Michael Morton, 616 White Horse Dr., Greenville, (919)752-2363
Programs Director, Albert J. Rachide, 2600 Brookhaven Dr., Kinston, 28501 (919)523-3187
Sec., Thomas R. Thutt, 1603 Crawford St., Kinston, 28501, (919)527-2106

Durham Orange Pharmaceutical Association
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Sec.-Treas., Vinve Stevens, 8408 Inverness Way, Chapel Hill, 27516, (919) 933-0583

Four County Pharmaceutical Association
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1st Vice Pres., Anissa Ellis, RR 1 Box 396, Henderson, 27536, (919)492-6344
2nd Vice Pres., Sholar Powell, PO Box 642, Oxford, 27565, (919)693-5837

Gaston County Pharmaceutical Association
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Guilford County Society of Pharmacists
Contact Person: Sec.-Treas., Frank Burton, 120 E. Lindsay St., Greensboro, 27401, (910)272-7139

Harnett County Pharmaceutical Society
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High Country Pharmacy Society
Contact People: Tom Taylor, Debbie Turner, Watauga Med. Ctr., PO Box 2600, Boone, 28607, (704)262-4424

Lincoln County Pharmaceutical Association
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Sec., David Keever, 696 Spring Side Dr., Lincolnton 28092, (704)735-0535
Treas., Ann Keever, same as above

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1st Vice Pres., Olwyn Wheeler, 4125 North Course Rd., Charlotte, 28277, (704)543-9575
2nd Vice Pres., Debbie Smith, 3200 E. Ford Rd., Charlotte, 28205, (704)376-8368
Treas., Vickie McLean, 9200 Myrtle Garden Ct., Matthews, 28105, (704)566-9436
Sec., Angie Jackson, (704)844-8875

Moore County Pharmaceutical Society
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Vice Pres., Robert Beddingfield, P.O. Box 1451, Southern Pines, 28388, (910)692-4702
Sec.-Treas., Ralph Cole, 15 Baltusrol Ln., Pinehurst, 28374, (910)295-6961

New Hanover County Pharmaceutical Society
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Sec.-Treas., Tonia Le Croy, 5454 Eastwind Rd., Wilmington, 28403, (910) 395-6089

North Eastern Carolina Pharmaceutical Society
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North West Pharmaceutical Association
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2nd Vice Pres., LeAnne Kennedy, 934 Watson Ave., Winston-Salem, 27103, (910)722-9424
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Sec.-Treas., Laura Dillard, PO Box 4113, Concord, 28025, (704)782-2425

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Vice Pres., Jack Duggins, 1417 Tahyer Dr., Asheboro, 27203, (910)629-1545
Sec.-Treas., Lydia Bulla, 726 Dublin Rd., Asheboro, 27203, (910)626-4035

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Vice Pres., Billy Horne Sr., PO Box 31, Hamlett, 28345-0031, (910)582-3585
Sec.-Treas., Greg Marks, 805 Long Dr., Rockingham, 28379, (910)997-4471

Rockingham County Society of Pharmacists
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Vice Pres., Andy Gaster, 203 Holly Hill Dr., Reidsvile, 27320, (910)342-9175
Treas., Gary Roberson, 544 Morgan Rd., Eden, 27288, (910)623-3132

Rutherford County Pharmaceutical Association
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Alcohol and Drug Services
Flo Stein, Chief
(919) 733-4670
Pharmacy Services
Robert J. Allen, Head
(919) 733-4506
@dmh.dhr.state.nc.us

DIVISION OF FACILITY SERVICES
Lynda McDaniel, Director
P.O. Box 29530
701 Barbour Drive
Raleigh NC 27603-2002
(919) 733-2343
Health Care Facilities Branch
Jesse Goodman, Branch Head Nurse Aid Registry
(919) 733-2786
Licensure Certification Section
Steven J. White, Branch Health of Licensure & Certification
(919) 733-7461

DIVISION OF MEDICAL ASSISTANCE (MEDICAID)
C.B. "Benny" Ridout, Pharmacist Consultant
1985 Umstead Drive
Raleigh NC 27603
P.O. Box 29529
Raleigh NC 27626-0529
(919) 733-2833
(919) 733-5609 FAX

NC HEALTH CARE FACILITIES ASSOCIATION
J. Craig Souza, Executive Vice President
5109 Bur Oak Circle
Raleigh NC 27612
(919) 782-3827

NC HOSPITAL ASSOCIATION
C. Edward McCauly, President
P.O. Box 80428
Raleigh NC 27605
2400 Weston Parkway
Cary NC 27513
(910) 677-2400

NC MEDICAL SOCIETY
Robert W. Seligson, Executive Director
222 North Person Street
Raleigh NC 27611
(919) 833-3836
(800) 722-1350
(919) 833-2023 FAX

NC NURSES ASSOCIATION
Sindy Barker, Executive Director
P.O. Box 12025
103 Enterprise Street
Raleigh NC 27605-2025
(919) 821-4250
e-mail: ncnurses@aol.com

NC PHARMACEUTICAL ASSOCIATION
Fred Eckel, Acting Executive Director
Institute of Pharmacy
109 Church Street
P.O. Box 151 (27514)
Chapel Hill NC 27516
(919) 967-2237
(800) 852-7343
(919) 968-9430 FAX

NC PUBLIC HEALTH ASSOCIATION
Dicie Alston, President
1009 Dresser Court
Raleigh NC 27609
(919) 872-6274

NC SOCIETY OF HEALTH-SYSTEM PHARMACISTS
P.O. Box 968
109 Church Street (27516)
Chapel Hill NC 27514-0968
(919) 933-6760
(919) 968-9430 FAX
e-mail: ncshp@mindspring.com
web site: http://www:mindspring/~NCSHP
Career Line: (919) 967-8980 (24 hours)

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Phoenix AZ 85072-2115
(602) 391-4600
(800) 345-5413

PHARMACEUTICAL MANUFACTURERS ASSOCIATION
Alan Holmer, President
1100 15th Street, NW
Washington, DC 20005
(202) 835-3400
(202) 835-3414 FAX
homepage: http:www.pharma.org

PHARMACY NETWORK OF NORTH CAROLINA (PNNC)
J. Andrew Barrett, Executive Director
4000 Old Wake Forest Road
Suite 101
Raleigh NC 27609
(919) 876-4642

PHARMA-STAT, INC.
Laura Burnham, President
David Corbet, Vice President
Nancy Lingenfelser, Secretary
P.O. Box 24973
Winston-Salem NC 27114
(800) 252-STAT
e-mail: pharmastat@aol.com

PHARMACIST RECOVERY NETWORK (PRN)
Dave Marley, Executive Director
3500 Vest Mill Road, Suite 9
Winston-Salem, NC 27103
NCPRN Helpline: (910) 774-6555
(910) 774-9010 FAX

POISON CONTROL CENTERS

CAROLINAS POISION CONTROL
Marsha Ford, Acting Director
1012 S.Kings Dr., Suite 206
Charlotte NC 28283
(800)848-6946 Outside Charlotte
(704)355-4000 Inside Charlotte
e-mail: yahoo@med.unc.edu

TRIAD
(Alamance, Randolph, Rockingham, Forsythe, & Guilford Counties)
David Wheeler, Director
Moses Cone Hospital
1200 N. Elm St.
Greensboro NC 27401-1020
(800) 953-4001 (24 hours)

Area Health Education Centers (AHECs) & Faculty

WESTERN NORTH CAROLINA
Carole Summerlin, Coordinator
Memorial Mission Hospital
509 Biltmore Avenue
Asheville NC 28801
(800) 542-4225

STATE BUREAU OF INVESTIGATION
James J. Coman, Director
3320 Old Garner Road
Raleigh NC 27610
(919) 662-4500
(919) 662-4523 FAX

UNIVERSITY OF NORTH CAROLINA SCHOOL OF PHARMACY
William H. Campbell, Dean
CB #7360 Beard Hall
Chapel Hill NC 27599-7360
(919) 966-1121
(919) 966-6919 FAX
Continuing Education
Pamela U. Joyner, Director
(919) 966-1128

SOCIETY OF VETERINARY HOSPITAL PHARMACISTS
School of Veterinary Medicine
Lousiana State University
Baton Ruge LA 70803-8420
(504) 346-3211

US PHARMACOPEIAL CONVENTION, INC. (USP)
Jerome A. Halperin, Executive Director
12601 Twinbrook Parkway
Rockville MD 20852
(301) 881-0666
(301) 816-8299 FAX
Drug Product Problem Reporting Program
Diane McGinnis, R.Ph., Program Coordinator
(800) 638-6725

AREA L - AHEC
1631 South Wesleyan Blvd.
P.O. Drawer 7368
Rocky Mount, NC 27804-0368
Frank Yarborough, B.S.
(919) 972-6958
Peggy Yarborough
(919) 972-6958
(919) 972-0419 FAX

CHARLOTTE - AHEC
1000 Blythe Blvd. P.O. Box 32861
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Fern Paul Aviles
(704) 355-3863
(704) 355-7825 FAX

COASTAL - AHEC
PO Box 9025
Wilmington, NC 28402-9025
Bruce R. Canaday
(910) 343-0161
Kimberly A. Thrasher
(910) 343-0161
(910) 762-9203 FAX

EASTERN - AHEC
Department of Family Medicine
ECU School of Medicine
Greenville, NC 27858-4354
Christy Whitley
(919) 816-2611
J. Michael Spivey
(919) 816-2599
Doyle "Skip" M. Cummings
(919) 816-2586
Joey Pippin
(919) 816-5512
Sandra H. Lilley
(919) 816-3838
(919) 816-5229 FAX

SOUTHERN REGIONAL AHEC
1601-B Owen Drive
Fayetteville, NC 28304
Elizabeth Early, (910) 678-7258
Carlos C. da Camara, (910) 678-7264

GREENSBORO - AHEC
Moses H. Cone Memorial Hospital
1200 North Elm Street
Greensboro, NC 27401
Peter Gal (910) 574-7932
Christopher Shaffer (910) 574-7244
Peter Koval (910) 574-7462
(910) 574-7591 FAX

MOUNTAIN - AHEC
501 Biltmore Avenue
Asheville, NC 28801
T. Donald Marsh
(704) 257-4467
Barbara A. Kostic
(704) 257-4464
(704) 258-2097 FAX

NORTHWEST - AHEC
Bowman Gray School of Medicine (Oles)
Dept. of Family/Community Medicine (Kirk)
Medical Center Blvd.
Winston-Salem, NC 27157-1084
Karen S. Oles
(910) 716-3649
Julienne K. Kirk
(910) 716-9043
(910) 716-7359 FAX (Oles)
(910) 716-9126 FAX (Kirk)

WAKE - AHEC
Regional Education Service
3024 New Bern Avenue, Suite G03
Raleigh, NC 27610-1225
Stacie Krick
(919) 250-8018
(919) 250-7963 FAX

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Durham, NC 27710
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DURHAM REGIONAL HOSPITAL
3643 North Roxboro Street
Durham, NC 27704
Paige Blackman
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(919) 470-7384 FAX

Note: Due to the lengthiness of this directory, the continuing education article has been omitted. Continuing education articles will resume in the January/February 1998 issue with Patient Counseling Part 2: Basic Concepts and the Itch Response. If you are in need of more non-contact CE credit, please call the NCPhA office at 919-967-2237 or 800-852-7343 and we will be happy to assist you.

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Cat-Scratch Disease (CSD)

Cat-scratch disease (CSD) is a relatively common, zoonotic infection with a majority of cases occurring under the age of 21 (although recent data suggests otherwise). The main clinical feature of the disease is the development of regional lymphadenopathy after a cat scratch or bite distal to the involved lymph node.

Although the infection was described more than 40 years ago, the responsible gram-negative bacillus was first isolated and cultured in 1988 from patients with infected lymph nodes. The causative agent of CSD was first attributed to *Afipia felis*; however, recent evidence points to *Bartonella* (Rochalimaea) *henslae* as the major organism responsible for CSD. Several studies have found that 90 to 100% of patients with suspected CSD are seropositive for B. henslae.

Although CSD is a worldwide problem, infections with *B. henslae* are of significant concern in the United States since over 30% of all American households own at least one cat. *B. henslae* was first cultured from cats in 1992 and more recently, it was found that 81% of cats belonging to patients with CSD had positive titers for the organism.

Recent data has also shown that the risk for CSD increases with ownership of a kitten. This suggests that transmission is more likely to occur with a younger cat since they may scratch and bite more during play than older cats. Cat fleas have also been implicated in the transmission of the organism. Cats who carry the organism are healthy, and so detection of potential infectivity in these animals is difficult.

Before the introduction of reliable serologic testing, the diagnosis of typical CSD case was traditionally based on the presence of three of the following four criteria: 1) contact with a cat and the presence of a scratch or primary lesion; 2) a positive skin test; 3) negative studies for other causes of lymphadenopathy, such as other infections, congenital defects and malignancies should always be considered and ruled out.

Despite the excellent *in vitro* susceptibility of *B. henslae* to many antibiotics, specific recommendation for treatment of CSD are not available in the literature. Furthermore, there are no controlled clinical trails to determine if antibiotics accelerate the resolution of lymphadenopathy or the clinical illness. Most immunocompetent patients with CSD should receive symptomatic care. Prognosis in these patients is excellent.

Antibiotic therapy may be indicated for patients with more severe disease or an atypical presentation. Antibiotics which have been used with some success in a standard 10 to 14-day course include rifampin, ciprofloxacin, erythromycin, ampicillin/clavulanate, and TMP/SMX. Relapses have occurred six to 13 months after a standard course of antibiotic therapy. Until the results of controlled trails are published, the optimal therapy and duration of treatment with CSD will not be known.

Carlos C. da Camara, PharmD, Clinical Assistant Professor, Campbell University, School of Pharmacy and Ambulatory Care Specialist Fayetteville Area Health Education Center.

Harold Vann Day Gives 36 Years of Service to NC Board of Pharmacy

Harold Vann Day has 36 consecutive years of service with the NC Board of Pharmacy, serving longer than any other Board of Pharmacy member in the country. Day had been elected by the pharmacists of North Carolina for eight consecutive terms to the Board of Pharmacy and has served as President of the Board six times (1970, 1975, 1980, 1985, 1991, and 1996).

Over the last 36 years, Day has attended nearly 400 regularly scheduled Board meetings and has administered 72 licensure examinations. Moreover, Mr.Day has signed over 7,000 certificates for Pharmacist licensure in the state of North Carolina.

(Left to right) George Cocolas, Linda Butler and Lee Worley

On November 23, 1997, the North Carolina Board of Pharmacy hosted a dinner honoring Mr. Day at The Carolina Club in the George Watts Hill Alumni Center in Chapel Hill, NC. Mr. Jack G. Watts, NC Board of Pharmacy president, was the master of ceremonies and Dr. Thomas Holmes, Campbell University School of Pharmacy, gave the invocation. Tributes to Mr. Day were given by Ruffin Bailey, Bailey & Dixon; Kenneth Wooten, Bailey & Dixon, Counsel Emeritus; Charles Notthingham, University Motor Inn; and, W. Whitaker Moose, NC Board of Pharmacy member.

(Left to right) Bill Biggers, Babette Blaug and Al Lockamy

Mr. Day graduated in 1952 from the University of North Carolina at Chapel Hill with a B.S. degree in Pharmacy. After receiving his pharmacy license, he took over his father's drug store, Day's Drug Company, in Spruce Pine, NC which was established in 1929 by L.G. Day. In 1967, Day organized and implemented the first pharmacy services for the Spruce Community Hospital and served as the Director of Pharmacy for 22 years with the hospital.

Jack Watts (left) and Harold Vann Day

Throughout his career, Day has been active in professional associations and activities. He served as a pharmacist preceptor for pharmacy students for many years and has been a member of the National Community Pharmacists Association (formerly NARD) since 1952. Day has also been a member of the North Carolina Pharmaceutical Association since 1954 and the American Society of Health-System Pharmacists since 1970. In 1987, Day was appointed by the North Carolina Governor as a member of the NC Commission for Health Services for which he served five years.

In 1991, Day started working in retail pharmacy for Rite Aid Drug Store and is currently employed by Revco Drug Store in Spruce Pine, NC.

Jesse Pike (left) and Dave Claytor

War on Druggists

If you think only bad people get in trouble with drug law violations, think again. Take, for example, a recent case in Florence, SC, against six pharmacists and their employer. The civil complaint alleged more than 130 violations at $25,000 per charge for a total of over $3 million against these first offenders. The large majority of allegations were of a technical nature such as having a prescription dated in one place and not another or failure to complete a box on a federal form.

The core of the problem involved a carpet installer who did some work in a pharmacist's home. She did not realize that, in addition to his carpet skills, he was a con man with a history of several drug convictions in the Carolinas. When he learned that she was a pharmacist, he laid the groundwork for a scam to get drugs for his personal use.

He spoke of all the problems with his father's terminal illness, so she saw nothing irregular when he brought a prescription to her store for a strong narcotic for his dad. After the first prescription was filled, a natural assumption of therapy to continue pain relief bypassed the scrutiny ordinarily applied to new prescriptions. Other pharmacists filled more of these prescriptions, believing that they were meeting a legitimate need.

When the pharmacists realized that the man's prescription were phony, they turned him in to authorities and he is now in prison.

The federal Drug Enforcement Administration (DEA) then aggressively took over the case and combined it with some technical violations in two other stores more than 100 miles away for an overwhelming number of charges and penalties into the millions of dollars. All of this for conduct that may have been naive, but never intentionally illegal with no profiteering and no diversion to the illicit market. One could not find a better example of the "unwarranted use of federal power" as recently described by Attorney General Janet Reno.

Now, as a practical matter, the defendants in the case can attempt to fight the government, but they are not likely to win more than 130 in a row. Not to mention that in today's climate, there is often a public presumption of some culpability with so many charges and even more so when drug offenses are involved. As you might imagine, the pharmacist defendants felt avalanched when they received the court papers stating, "The United States of America *vs.* Jane Doe." *Three of the six pharmacists in the case are women.*

A natural response of any company in this situation is, "Let's settle this out of court." And the federal authorities offered to do just that, mentioning a figure near 10 percent of the total exposure. The parties eventually reached a monetary settlement, even though the defendants were not wrongdoers.

This is not the first time a case such as that one has occurred. In Raleigh, for example, a nonprofit hospital paid $225,000 and a local chain drug store coughed up $325,000 to settle similar claims. While all of this is couched in proper legal terminology as a civil penalty, the solid citizen respondents in the case looked on it as nothing less than extortion.

There are several reasons why this kind of complaint has not surfaced in the past. Laws and rules on drugs are so extensive that it is virtually impossible for a physician, pharmacist or nurse to effectively serve the public without a violation. I have a standing offer to all pharmacists that they can have one week to get their pharmacy in order, and if I can't find a violation in three minutes I'll give them $5. Over the last 25 years, nobody has accepted that offer. This reflects a realistic acceptance that there are so many drug laws that any health practitioner with a conscience who serves the public is probably a violator on a daily basis.

These same pharmacists also fear that any protest about government conduct could invite retaliation from those criticized. They would then be in the position of a repeat offender and receive even more grief.

We have all seen those protesting against what happened in Waco and Ruby Ridge. Most, but not all, seem to be on the fringe of society. But it's altogether different when small businessmen and ordinary taxpayers protest tactics used by the Internal Revenue Service. Targeting pharmacists, named year after year in Gallop polls as the most respected professional person is still another level of federal pressure on citizens.

The DEA personnel who pursued these pharmacists are really another unnecessary layer of government at this level. Every state has a controlled-substances act and enforcement authorities parallel to the federal law, as well as licensing boards to act against professional malfeasance. It would seem to be a more prudent allocation of DEA resources to assign these agents to El Paso or Nogales where they can have some real impact on the war on drugs. The current system only gives federal authorities an opportunity to destroy careers and at the same time tear a monetary strip off any person or company with the ability to pay.

The Board of Pharmacy column, a standing feature of the Carolina Journal of Pharmacy, is authored by David R. Work, Executive Director of the NC Board of Pharmacy.

North Carolina Pharmacist Recovery Network, Inc. – Here to Help You

What is NCPRN?

The North Carolina Pharmacist Recovery Network, Inc. is a non-profit, charitable organization dedicated to the early identification, intervention, and treatment of, as well as advocacy and monitoring for, the impaired pharmacists and pharmacy students of North Carolina.

NCPRN also provides ACPE approved continuing education programs, designed to inform and enlighten all pharmacists and pharmacy students about the disease of chemical dependency within the profession of pharmacy.

How is NCPRN Funded?

With the passage of NC House Bill #948, "An Act to Allow the Board of Pharmacy to Establish a Rehabilitation and Recovery Program for Pharmacists," as well as NC House Bill #933 which will increase pharmacy license fees, NCPRN will receive up to $10 per license and renewal.

Support also comes from the clients we serve. Current monitoring fees are $25/month ($300/year) if they have not yet returned to the practice of pharmacy, and $50/month ($600/year) once they have returned to the pharmacy practice.

In the past we have also received support from: Knoll Pharmaceutical, PNNC, Dupont Pharma, NCPhA, NCSHP, UNC-Chapel Hill and Campbell University Schools of Pharmacy, and Revco.

Are Donations Tax Deductible?

Yes! In November of 1996, we were successful in getting the IRS to recognize NCPRN, Inc. as a 501(c)(3) approved tax-exempt organization. All contributions are therefore tax-deductible. You should however talk to your accountant regarding your individual situation.

How Serious a Problem is Chemical Dependency in the Profession of Pharmacy?

Current statistics suggest that between 12-18% of the profession is currently practicing impaired. In the state of North Carolina, that number translates to between 600 to 900 pharmacists.

How May a Pharmacist or Student Obtain Help?

Currently, assistance may be obtained by calling NCPRN's confidential voice mail system at 910-784-8566, and leaving a message. A response to that call will be made later that day.

By January of 1998, we hope to have a full-time Director in place to personally answer that call.

Where Do Calls for Assistance Originate?

A call may be made by the impaired person who realizes they have a problem with alcohol or other drugs, or a referral may come from the Board of Pharmacy. Other sources of contacts may be from fellow pharmacists or students, family members, other professionals or friends.

Under either circumstance, an appointment will be made at the nearest recommended Evaluation and Referral Center to determine the best course of treatment for the individual.

Are Anonymous Calls Accepted?

No. The caller must identify themselves, and give specific reasons for believing an impairment problem exists. This is to minimize the possibility of crank calls, and in the event additional information is needed from the caller, the Director will know how to make contact. The reporting person's name will remain confidential in all circumstances.

How Can I Get More Information?

Any questions can be answered by calling the **NCPRN HELPLINE at: 910-774-6555**

If you need help, please take a moment and call. It could be the best phone call of your life!

APhA House of Delegates/ NCPhA Awards

NCPhA has the opportunity to appoint seven delegates and five alternate delegates to the APhA House of Delegates. The House of Delegates will be meeting in Miami Beach during the APhA Meeting being held March 21-25, 1998. Please let us know by calling us (800-852-7343) if you are interested in serving as an NC delegate to the APhA House of Delegates.

NCPhA recognizes pharmacists who have made outstanding contributions to the profession of pharmacy and/or their community. Please consider nominating a pharmacist who you think is particularly deserving. We are seeking nominations for the Bowl of Hygeia (for sustained contribution to pharmacy), the Don Blanton Award (for significant contribution to pharmacy during the last year), Innovative Pharmacist of the Year (for a pharmacist who has promoted a new or unique role), and the Young Pharmacist of the Year (a graduate of fewer than 10 years who promotes the profession). Consider nominating one or more of your colleagues for professional recognition. NCPhA needs and appreciates your input.

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PHARMACIST WANTED: Pharmor is actively seeking full-time pharmacist positions in Greensboro and Asheville. Full benefit package and very competitive salary. Please contact: Melanie Petropoulos, 910-854-8892 or FAX resume to 910-855-9174.

PHARMACISTS WANTED: The New Kerr Drug Stores has positions available for pharmacists in NC. Excellent benefits. Send resume to: Jana Chicha, Human Resources, Kerr Drug, 2522 S. TriCenter Blvd., Durham, NC 27713.

PHARMACISTS WANTED: CVS is actively seeking full-time pharmacists in various Piedmont and western NC locations. We offer a complete benefit package including medical, dental, life and disability insurance, profit sharing, Rx bonus and continung education. Call Lori Setzer at 910-659-0433 or April Rogers at 910-485-1332.

PHARMACIST OPPORTUNITIES: Excellent environment in which to demonstrate professional skills. Positions available for the very best in many locations in the Carolinas. Excellent compensation and benefit programs including generous bonus and profit sharing. Send resume to Mark Chidester, Eckerd Drug Co., P.O. Box 31243, Charlotte, NC 28231, or call 704-371-3713.

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Closing dates for classified advertising is the first day of the month preceding the month of issue. The rate for NCPhA members is .25¢ a word with a $5 minimum; the non-member rate is .50¢ a word with a $10 minimum. Blind ads are available upon request. Send ads to Carolina Journal of Pharmacy, c/o NCPhA, P.O. Box 229, Chapel Hill, NC 27514-0229 or fax to 919-968-9430.

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Our new background billing program allows you to send to background processing as many electronic claims as you wish and as fast as you can fill them. After the initial dial, claims are processed as quickly as 7 seconds and automatically printed.

We can convert:
Liberty, QS1, 3PM, ComputeRX, HCC, PAM,
PAS, PC1, PS1, RNA, RX1, TBL, and Software, Inc.
Customers, Doctors, Sigs and prescriptions.

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